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SEPTEMBER.

"Where the bright Virgin gives the beauteous days,
And Libra weighs in equal scales the year;
From heaven's high cope the fierce effulgence shook
Of parting summer, a serener blue,
With golden light enlivened, wide invests
The happy world. Attempered suns arise,
Sweet beamed, and shedding oft through lucid clouds
A pleasing calm."

WORK FOR THE MONTH.

The Wheat grower will now of course use all dispatch to have his ground put in readiness for the seed. The preparation of the fallow will be pushed forward until the whole is well broken. The longer it can lie, after breaking, the better; but if by reason of drought or other hindrance, it be not yet done, the proper time of seeding is not of course to be deferred, but the sod must be well packed by harrowing and rolling. Early seeding is of so much importance upon every consideration but one, that we can but advise it strenuously. Sown in this latitude before the 5th of October, it is liable to the ravages of the fall fly. This is a serious evil and may be a fatal one. On the other hand, we run the risk from late sowing, first of a light crop from an inadequate supply of roots; second, the winter killing; third, spring fly and joint worm, for want of a vigorous growth; fourth, weevil or midge; fifth, rust. May we compromise upon a time which will steer us between Scylla on the one hand and Charybdis on the other? We are willing to admit that on well prepared clover fallow it is safe to sow from the 5th to the 15th of October. In doing so every thing should be well prepared in advance to despatch the seeding

without delay, and we should use fifty to a hundred pounds of Peruvian Guano in the drill.—With any preparation inferior to this we would take the chances of the fly and sow as early as possible after the 15th of September. Recollect that the amount of guano mentioned insures earlier ripening by about a week, and for this reason is worth the cost. We mean that much of *Peruvian* guano, whether alone or in combination with other things.

FERTILIZERS.

We should use, when any fertilizer is required, some *Peruvian* guano—fifty to a hundred pounds, as the case may require. Beyond this, if your land requires it, use either more *Peruvian*, or phosphatic guanoes, or super-phosphate, as your own or the judgment of your most discreet neighbours may determine from past experience in your neighbourhood.

LIME AND FARM MANURES.

Get and apply lime when you can. It is very well for the Wheat crop to put on even a few bushels to the acre, and especially well for the clover and grasses which may succeed it. A dressing of twenty-five to fifty bushels may be put on as convenience suggests; the smaller quantity to be repeated in a few years. Farm manures are always good for wheat, but should be used as a top-dressing after seeding unless well rotted, when it may be put in with the seed, or, with the surface working, before seeding.

PUTTING IN SEED.

For doing the work well and for economy of seed and manures, the Drill is almost essential to the Wheat grower. There are few who farm to any extent who are now willing to dispense with it. In the absence of the drill, put in with a

light furrow, using the seed plough, and cover seed and manure at the same time. Neither corn nor tobacco land should be broken before seeding. If the corn ground be covered so thickly with grass as to interfere with putting in the seed, the harrow will clear it sufficiently by running over, and back in the same track.

PREPARATION OF SEED.

The due preparation of seed Wheat should not be neglected. The most ready way is perhaps as efficient as any, viz: to wash effectually by slowly pouring the Wheat into a strong brine, which floats the smut balls, light grains, &c. These are carefully skimmed off and the Wheat drained in baskets, when it may be dried with lime, plaster, or guano. If allowed to soak some hours, as many prefer, there is considerable increase of bulk by absorption, which must be observed and allowed for in seeding.

RYE.

Rye should be sown at once—the earlier the better. It is not a favourite crop where wheat can be grown to advantage; it is useful, however, for late fall and early spring feed, when sown early, as well as for the grain.

TIMOTHY.

Sow Timothy seed any time this month and to the middle of October.

TURNIPS.

Work and keep late Turnips clean.

THE CORN FIELD.

Guard your Corn field against unruly stock. If Blades are to be saved for fodder, gather them in good time and secure them well against weather. They are easily damaged, and should be guarded against mold from damp ground, and housed as soon as possible. If wheat is to be sown upon corn ground, the corn should be cut off at the ground in this month whenever the cobs have generally turned white, and well secured in shocks. This method of treatment, however, is another argument against sowing wheat after corn. It is very difficult to get the corn sufficiently cured to make it safe from damage when housed.

THE TOBACCO CROP.

This is a month of great importance to the Tobacco grower. Worming, working, topping, suckering, cutting and hanging in the house, will all require attention according to the circumstances of the crop. The late Tobacco may still be worked. Worms must be choked off before the crop goes into the house. Continue to top as the growth advances, and be not greedy of too many leaves. What you lose in indif-

ferent tailings is more than gained in the length, weight and colour of the better leaves. Top all by the 15th of the month. Take out all suckers before housing. Do not cut when rain or dew is on, and after a hard or long rain let it stand for several days, that the leaves may thicken up again. In all the processes of cutting and housing, the watchful eye of the master or manager is essential. A great deal of the quality of the crop depends on the care and attention given it now.

THE VEGETABLE GARDEN.

SEPTEMBER.

It is important to use care now in ensuring crops of the several sorts of greens for fall, winter and spring use.

SPINAGE.

Hoe and thin out your growing crop of Spinage, and early this month prepare and sow seed enough for fall, winter and spring supply. They may be sown broadcast or in drills 12 inches apart, and when large enough, the plants should be thinned to 3 or 4 inches apart. A few of the early sorts of Radish may be sown with them for use in October or November. Keep them entirely clear of grass and weeds.

LETTUCE.

Plants from seed sown last month, when large enough, should be set in rich beds 10 inches apart. The last week in the month prepare a warm border where such plants as are large enough should be set in rows 6 inches each way, to stand over and be protected for early spring use. Sow seeds in this month for plants to be set out in same way late in the season. Of course the hardiest varieties are to be sown for this purpose.

RADISHES.

Sow Radish seeds early in the month for supply during fall. There are winter varieties which those who fancy may sow, and which are to be taken up on approach of winter and put in cellar.

ENDIVE.

Transplant full crop for fall and winter use.

CELERY.

Celery should be earthed up as it advances in growth, taking care not to cover the bud. Do this work in dry weather.

SMALL SALADING.

Sow seeds from time to time for a succession of these. Sow on a warm border, such as are designed to be protected for winter use.

TURNIPS.

Hoe and thin Turnips as they advance.

EARLY SUMMER CABBAGES.

Seeds of these should be sown early this month to ensure good plants. Water well if the weather continues dry, to ensure their growth. This is an important crop and should not be neglected. It is safe to make several sowings during the month, as those sown early, if they advance rapidly, are liable to run to seed in spring.

CAULIFLOWER.

Sow seeds from 20th to last of the month.

SEEDS.

Gather Seeds of all sorts as they ripen. Let them be well matured and dried, and when beat out put them up securely and label them.

GARDEN HERBS.

Any of the hardy perennial herbs may be transplanted in moist weather the last of this month.

THE FLOWER GARDEN.**DAHLIAS**

Will now be in full bloom. Take off some of the buds if they are numerous, to make fine flowers, and remove all suckers.

ROSES.

The latter part of the month is a good time to put down Rose cuttings. Make a gentle hot-bed and cover some four or five inches with fine sand, or put the cuttings in boxes of sand, water moderately and shade them for a few days. In two or three weeks they will have rooted and should be put into pots. Layering and budding may still be done.

WALL FLOWERS AND STOCKS.

The latter part of the month these should be taken up, put in pots, and watered and shaded for a week.

YOUNG PLANTS.

Plants of Sweet William, Canterbury Bells and other biennial and perennial plants from seed, may be planted in borders or beds where they are to bloom next year.

PETUNIAS.

Put down cuttings of the best varieties, and save seeds to get new sorts.

VERBENAS.

Put earth on the young shoots, which will cause them to root freely, and give good plants for potting next month.

CARNATIONS AND PICOTEEES.

Rooted layers of these should be taken up and planted in beds where they are to bloom next year.

BOX EDGINGS.

These should be clipped at once, if it has been neglected the two past months. New edgings

may be put down the last of the month. Should the weather prove dry and hot, they must be shaded.

HEDGES.

These should be trimmed now, if not done last month.

THE GREEN HOUSE.

The Green House should have a thorough cleansing to destroy insects, before housing the plants. Examine the plant house and have all damage in flues, staging, gangway, glass, &c., repaired.

SHIFTING PLANTS.

All plants which require shifting into larger pots should be attended to at once.

CAMELLIAS

Should be housed early in the month, and in warm weather get air both night and day.

FRUIT GARDEN AND ORCHARD.**GATHERING FRUIT.**

Continue to gather all Fruit as it ripens. Pears are fit to gather as soon as the stem will part readily from the wood by moving gently upwards and should then be gathered and matured upon shelves. Gather no fruit when wet with dew or rain.

PLANTING.

Make your preparation for planting at every convenient time by thoroughly digging borders and other grounds intended for the purpose. The most thorough preparation is by digging and trenching to the depth of two feet. Ordinarily, however, it will be found sufficient to plough and subsoil well. Thorough draining is absolutely necessary, when the ground does not readily drain itself naturally.

STRAWBERRIES.

This is the best season for planting Strawberries, and the sooner the better, that they may be well established before winter. They must be planted in wet weather unless you are prepared to give them a plentiful watering. Plant good young plants of this year's growth, trimming and straightening the roots before planting.—Light, dry soil is best when you wish for early fruit, and a south and south-west exposure. Heavier and moister soils produce larger and later crops. Very heavy manuring is not advisable for those you want to ripen early.

Spent tan bark is said to be a capital mulch about gooseberries.

THE VINEYARD.

The Grapes will now be ripening rapidly, and will require protection from birds and other depredators. Keep the ground free from weeds and the branches tied up, to give the fruit the full benefit of sun and air.

WINE MAKING.

It is to be presumed that every grape grower will take care to inform himself of the best method of making wine from his grapes. This must be now looked to in time.

THE NURSERY.

BUDDING.

Peaches and indeed all fruits the bark of which still separates freely may be budded.

GROUND FOR PLANTING.

Prepare as you have opportunity such ground as you intend planting with seeds or young stock of any sort.

STONES OF FRUIT.

It is better, if you have the ground ready, to plant at once the stones of Peaches, Plums, Cherries, &c.

Sombrero Guano.

The following letter from a citizen of Baltimore and a large importer of Sombrero guano, has been handed us. The extent of the operations it exhibits in one of the leading articles of phosphatic guano will doubtless surprise many of our readers:

SOMBRERO (GUANO) ISLAND, 16th June, 1860. }
Lat. 18° 38' N., Long. 63° 30' W. }

GENTLEMEN: Since my last letter per schooner Baldwin, the ship Eastern Star, brigs St. Mary's, Mary Capen and Brothers, schooner Wm. Clark, and sloop Coral have arrived for cargoes, which, with twenty-eight or thirty other vessels now under charter for guano from this island, render it no boy's play to superintend operations here.

The Island of Sombrero and its appurtenances are of no small or inconsiderable magnitude. The houses for officers, overseers, laborers and stores, double-track railroad, powder magazine, cisterns, (substantially built of stone and cement,) lighters, the two tenders, (schooner and sloop,) the iron buoys and moorings, (2½ inch chains,) the horses, mules, carts, cars, derricks, stables, hogs, sheep, goats, fowls of nearly all kinds, and an average of about 200 men to feed and pay daily, make up a sum total of the Sombrero guano importation that but few are aware of.

A Spanish man-of-war, Hernan Cortez, a steam frigate with officers and crew numbering about 200 men, has been at anchor here for the last two

days. The exact object of their mission I do not know. In the absence of Capt. Howard, the Superintendent, I tendered all the hospitality that could be given them, and did all in my power to facilitate their mission, whatever it might be. They being all Spaniards—speaking little or no English, and I no Spanish—an explanation of their real object was difficult, even were they disposed to give it. I gave them free access to any and all information desired about the island, having invited all the officers ashore daily. They in return invited me aboard the frigate, and whilst aboard each seemed to vie with the other as to which should tender the most polite hospitality and information, which state of things tended to bring about as much apparent unreserve and frankness as if they were American officers aboard an American man-of-war, and so far as I could gather from them, their government had heard of this island having a house or hut on it, as if some one either did or had lived there, and if so, they wished to ascertain whether they were Spanish subjects, and also report soundings, weather, &c. This being the case, as they represent, they were perfectly amazed when they approached the island and found one large ship, three brigs, two schooners and one sloop at anchor, waiting for cargoes of guano, and yet more so when they came ashore and witnessed the magnitude of operations, and beyond all, when they were shown the shipping bulletin, showing that one hundred and ten vessels had been freighted and discharged from here with guano, and that we now had under charter thirty vessels *en route* here for cargoes, besides those now here awaiting cargoes. The truth of all this, as also the time made in the manner of shipping, our occupation of and title to the island, they were all made to understand fully. After presenting them a chart of the island, our history upon it, specimens of guano, its many analyses, &c., they departed for their station, (St. John's, Porto Rico,) apparently as well pleased with their visit as a boy with a new top, and their imaginations stretched as tight as a drum-head by the force of Yankee enterprise. May their trip afford them as much information as it has us amusement. Respectfully, A. C. E.

P. S.—The "Clark" has just arrived from Guadaloupe with cargo of water (9000 gallons)—stock on hand three days' supply only; owing to this unusually dry season, she failed to get any either at St. Martin's or Antigua. Our domestic comforts here—with the exception of variety of vegetables—are as good and as healthy as any watering place in the States that I have seen. A. C. E.

Shallow Planting of Trees.

CUMBERLAND, August 2d, 1860.

To the Editor of the American Farmer:

In traveling over your State I find one great error prevails in regard to planting trees, and that is simply this: they all plant too deep. Nature never intended to have trees planted in holes—she plants her trees on the surface. The roots of plants and trees need air as much as the branches, and I believe they require more than the branches. The higher I plant the more vigorous becomes my tree. I planted, in 1857, five hundred peach trees on the surface, and they are to-day larger and finer than trees that have been planted for six years. I received from a nursery some shade trees that had been planted deep; I found them perfectly destitute of fibrous roots. I planted them on little ridges, three inches higher than the general surface; they all grew finely; the next spring I took up some twenty or thirty of them and found the root one complete mass of fibres. I believe that two-thirds of all trees that are planted are ruined by deep planting. A tree that is improperly planted, will often grow for six months and then die. I account for that in this way: it lives on what stores the tree laid up the previous year, and when that is exhausted your tree dies from starvation, the root having remained inactive and received nothing from the air. Where the soil is sandy or loamy, the air penetrates to a greater depth, and deep planting does not always destroy the trees, but in clayey land, and heavy limestone land, if you wish to be successful, plant shallow and you will find no trouble about growing trees. Many persons plant trees deep, so that the wind will not blow them over. That is the very reason that they blow down, because they have no roots to support them. Look at corn throwing out brace roots on the surface to protect it against storms and to feed it. There is no farmer in Maryland but has some old peach or cherry tree on his farm; examine it and you will find the roots near the surface prepared to resist the storm, and they are more healthy, longer lived, less subject to disease, produce more fruit, &c. Readers of the *American Farmer*, if you will only try this natural way of planting trees, I am confident you will have less trouble about getting your trees to grow.

I will give you my way of planting: I prepare my land by thorough ploughing and subsoiling, then such trees as the apple, peach, cherry, plum, standard pear, &c., I plant on the surface, the dwarf I plant just deep enough to cover the bud, say one inch, then mulch the first

year with litter. If the trees are large, tie them to a good stake. Try shallow planting, and my word for it, you will be pleased with your labor and be repaid one hundred fold.

A TREE PLANTER.

We can bear witness, from personal observation, to the success of our correspondent as "a tree planter." We have never seen a finer growth of young trees than his. But—we did not give the shallow planting the credit of this altogether. There was evidently great care and skill in all respects, bestowed upon his trees. The arguments in favor of shallow planting, even on the surface, are not without force, and it is an additional argument that it commends itself to so experienced and judicious a tree planter as our correspondent.—EDITOR AMERICAN FARMER.

Summer Pruning.

We commend to notice the following article, from the pen of Mr. Saunders, horticultural editor of *The Farmer and Gardener*, on the subject of *Summer Pruning*, which was crowded out of August number:

"Pinching" is a term often used in horticultural literature, and is one of those technical words that, although well understood among the initiated, has a very indefinite meaning to the general reader, at least in its horticultural application.

Pinching is a mode of summer pruning whereby robust shoots are checked, at an early stage of their growth, by removing their extreme points with a pinch between the thumb and finger—this retards, for a time, their extension, and induces growth in lower buds that would, in all probability, have remained dormant. The process is applicable to all trees and plants, and is the best method of securing any desired form of growth or shape of plant, but is now becoming more associated with the management of fruit and the production of fruits, than it has been heretofore, and its advantages are slowly being recognized.

The great tendency to growth in healthy trees is towards the extreme points of branches, and in the prevalent mode of winter pruning, those of robust growth are cut back more or less severely. This is done with a view to encourage side or lateral growths, but it is a very imperfect mode of gaining advantages which are more readily secured by judicious and timely care in summer. A moment's reflection will convince any one that it is at best but a negative practice to allow a tree to make a heavy growth of wood

during summer and remove it with the pruning knife in winter, thus sacrificing and throwing away as useless what has been the great aim of the cultivator to produce. There are exceptions where winter pruning will be absolutely a necessity; in young trees for instance, it is evident that a healthy, vigorous and extended system of roots is of paramount importance. Sickly, or weak growing trees will also be rendered more vigorous by cutting the branches well down in winter; but when the tree is well established, it is perfectly practicable to maintain its productiveness, and induce it to assume any desired form by pinching during the season of active growth, and we hesitate not to assert, that the highest point in the culture and management of fruit trees will not have been reached, until this principle has become fully recognized and generally acted upon.

Even in an economical point of view with reference to labor, it is obvious that a saving will be gained by rubbing off a bud in June, instead of having to cut a branch in December. Indeed the amputating of large branches is altogether obviated, and the nutriment which would have been appropriated by such, is absorbed by the branches retained.

Trees vary so much in their habits of growth, and are so susceptible to the influences of soil and climate, that no definite practical rules can be given even by the most expert, that would form a safe guide to the novice in tree culture. It is a matter of individual experience and observation; no amount of explanatory information will convey more than the necessity for the recognition of the general principle, and that once firmly established in the mind, and the theory thoroughly understood, the cultivator will readily acquire the discriminating knowledge which always follows practical experience and close observation.

One of the most common errors in summer pruning, and one that is also extremely injurious, is that of delaying the operation until growth has made considerable advance, and then in order to secure the emission of shoots at certain points a severe diminution of active foliage is the consequence. We have seen grape vines thus treated, (allowed to proceed unchecked until the middle of July, and then a foot or more taken from the end of each shoot,) that were completely paralyzed and the crop a total failure, the berries remaining green until overtaken by frost.

It is such occurrences as the above that give rise to the many apparently conflicting statements that abound in our horticultural and agricultural

literature. A course of practice is undertaken without a proper knowledge of the system or the principles upon which it is founded, and when failures occur, they are seldom attributed to their proper source.

The perfection of summer pruning, then, consists in checking the growth of particular shoots, without diminishing the foliage; when the extreme point of a branch is bruised, growth will be checked without the removal of leaves.—Nothing is more certain than this, that the welfare of the crop depends upon a full growth of healthy foliage.

Clay for Sandy Soils.

"Clay," says the author of the *Elements of Scientific Agriculture*, "is found to be the most valuable application for light soils possible; it consolidates them and causes them to retain water and manure, and for the objects of permanent improvement is worth more, load for load, than manure."

A correspondent of the *Boston Cultivator* gives several facts going to illustrate the above statement, some of which we condense for our readers. Four years since he carted several loads of clay on a bank of light sandy loam, upon which it had been impossible to obtain a sward, from its loose, blowing character and situation. It was spread out, ploughed under, and a light coating of clay given on the surface, and then the land was sown to barley and seeded down. Now the clayed bank gives better crops than any portion of the field. A neighbor put on a piece of clear sandy land, a load of clay and a load of muck to each rod, and sowed to carrots. The product was five bushels per rod.

The application of clay at the rate of fifty loads per acre has been known to so change the character of light friable sands, that the productiveness was kept far above that of similar land not clayed, for twenty years, and no doubt much longer, both bearing the same crops and receiving the same treatment. It was the opinion of Mr. More, who took the first premium on farms offered by our State Agricultural Society some years since, that tough, blue clay was of more value for sandy soils than the best stable manure, ton for ton, as he had proved by the application of both in large quantities. "Still," adds Mr. Howard of the *Cultivator*, "there is much difference in clay in regard to its composition, and it would be advisable to ascertain its qualities by a small trial, before incurring great expense in its application." But no farmer who can conveniently obtain clay for his sandy lands should neglect such an obvious and valuable means of improvement.—*Country Gentleman*.

Salt as a Fertilizer.

In our last we had the inquiry from a correspondent, "What is *your* opinion of salt as a manure?" We are, like our correspondent, not prepared, from our own experience, to give a satisfactory answer. We find in the *Country Gentleman*, from Professor Johnson of Yale College, the following "résumé of what is known and conjectured" on the subject. The use of salt is well worthy of careful experiment, and it is matter of surprise that so little is really known of its actual value.—Ed.

The action of salt as a fertilizer, has long been a matter of uncertainty and dispute among agriculturists. In many cases it has been reported to be extremely useful, in many more to be entirely valueless, and in some positively disastrous.

We have no reason to disbelieve the testimony that has been offered at various times, and from a wide range of experimenters, although it is so contradictory in its character.

If the various statements concerning the use of salt as a fertilizer are true, the important question arises, how are we to know when it will be useful, and when otherwise?

This question can only be answered by the repetition of experiments, which must be made under a great variety of circumstances, and under conditions that are accurately known and defined.

In conducting such an inquiry, it is of the first importance to gather from the existing stock of experience, all the facts which throw any light either upon the question itself, or upon the methods of investigating it.

Under the conviction that a multitude of careful trials may be instituted among our farmers, with the prospect of explaining the contradictions of former experience, or at least of revealing the valuable fact that salt is capable of doing the agriculturist great service in many localities where it has not yet been tried, and also of contributing to the education of the public in the objects and methods of experimental agriculture, we have drawn up from various sources the facts, assertions and probabilities which may serve as guides in attempting the solution of this problem.

1st. We know that the constituents of common salt (chlorine and sodium) are unfailing ingredients of all agricultural plants, although they exist in vegetation in very variable, usually quite small amount.

2d. We know that in many instances (perhaps in all where this subject has been accurately studied) the use of salt as a manure has increased (often doubled) the amount of salt in the crop.

3d. We know that crops having large foliage contain (and require?) more salt than those of the small-leaved and few-leaved kinds.

4th. It is said that tobacco is largely increased in quantity, but injured in quality, by applying salt as a manure. The same is said of sugar plants.

5th. It is probable that the white beet, mangel-wurtzel, and carrot, among field crops, (as is certain of asparagus in the garden,) being originally marine crops, will be more strikingly benefitted by salt than other crops, and will admit of larger applications, other things being equal.

6th. We know that many soils near saline springs, (or reclaimed from salt marshes,) naturally contain as much or more salt than is needed for the growth of agricultural plants.

7th. We know that in many regions (those exposed to prevailing and especially stormy winds from the ocean,) the soil annually receives from spray and rain more salt than is annually removed by crops.

8th. We know that salt is most often injurious in dry seasons, or on dry soils.

9th. It is probable that the positively injurious effects of salt are chiefly due to its being applied in too large quantity; for

10th. We know that a strong solution of salt hinders the germination of seeds, and destroys the life of the growing plant (marine plants of course excepted.)

11th. We know (from the recent experiments of Sachs and Knop in Saxony,) that a weak solution of salt hinders (by one-half or more) the transpiration of water through the plant; therefore,

12th. It is probable that a little salt has the effect to keep the soil more humid, and thus tends to counteract drouth; and,

13th. It is probable that a little salt, by hindering excessive transpiration, (and too rapid growth?) causes the cellular tissue of the plant to develop in a firmer, healthier manner than it might otherwise do; and thus may be explained,

14th. The assertion that a bushel or two of salt per acre on grain crops prevents falling (laying or lodging) of the straw.

15th. It is, however, the experience of Girardin, Fauchet, and Dubreuil, that large doses (more than 370 lbs. per acre) increase the straw rather than the grain, and make the crop lodge on soil that has been dunged.

16th. It is said that the small applications of salt make the straw of the grains brighter, and prevents rust.

17th. It is said that large applications delay the ripening of the grain.

18th. It is said that salt prevents potato rot (by delaying the sprouting and blossoming of the plant, so that the critical period of its life is brought after the hot fogs and rains of late summer?)

19th. We know, from many trials, (those of Kuhlmann, and recent ones of Liebig,) that salt often remarkably heightens the effect of other powerful manures.

20th. We know (from the studies of Way and Eichhorn) that salt is able to displace potash, ammonia and lime from insoluble combinations of these bodies,—combinations such as, in all probability, exist in the soil. Therefore, and because

21st. We know that salt increases the power of water to dissolve the phosphates of lime, magnesia, &c.

22d. It is probable that its use may, on certain soils, be equivalent to an application of these bodies, by rendering the stores of them already existing in the soil available to crops.

23d. It is probable that salt is sometimes advantageous, not so much as a fertilizer, as by destroying worms and the larvæ of insects.

24th. It is certain that fields well manured with stable or yard manure, made from cattle that are supplied with all the salt they desire, thus receive more salt than is removed from them in ordinary culture.

25th. It is probable that thorough-drained fields will be more benefitted by (and require more?) salt, than undrained fields of similar soil.

26th. It is a matter of experience, that while 500 to 600, or even 800 lbs. of salt may be applied per acre before the seed, without injury, (in moist climate or wet season,) not more than 200 lbs. per acre should be put directly on the growing crop.

Any one may easily select for himself from the foregoing some one or more points that it is desirable to test in his own locality, and will also readily gather the most important circumstances that need to be regarded in carrying out an experiment to a good result.

We add, however, the following suggestions as to the manner of making experiments:

I. Every experiment should furnish means of comparison with some standard. If, for example, it is sought to ascertain whether salt increases a crop on a given soil, not only should a portion of the crop and soil have salt applied to it, but another portion should be left without the application. If the question is, is the straw strength-

ened, or the grain made heavier? then, obviously, opportunity must be given to observe how strong the straw is, or how heavy the grain is, where no salt has been used.

II. The plots of ground should not usually consist in a strip a few feet wide, or in a few rows of the crop, but in a nearly square surface, so as to have as little edge to the piece as possible, for the roots of plants often extend several feet beyond ordinary dividing lines, if the soil be grateful to them.

III. The experimental ground should be as uniform as possible in quality of soil, in tillage, dunging, and exposure, and should all have had the same treatment as regards cropping and manuring for several years previous to the trial.

IV. The plots should be of good size, at least one-eighth, preferable one-fourth of an acre.

V. "Everything should be done by weight and measure;" guesswork is worse than useless. Let the plots be accurately measured, not "paced off." Let the materials added, and the crop removed, be carefully weighed, and not "estimated by the eye."

VI. Every care should be used to observe and record, with fullness and accuracy, the character, exposure, present condition and previous management of the soil. The climate and weather, the development of the crop in all its parts, and in all stages of its growth, and generally, all facts bearing on the experiment, should be taken into the account.

Draining.

The great advantage of land drainage, apart from that circulation of the feeding agent through the soil, which it promotes, depends no doubt on the immediate penetration of the spring and summer showers, and their conveyance of the atmospheric temperature into the soil and subsoil, which, without some such agency, would retain the winter season for the roots of plants, while their leaves and stems were rejoicing in the summer sun and air. This influence is hardly injured by any merely surface cooling which evaporation may produce, and the probability that drained land experiences, during summer, even more of this surface cooling than land that is undrained, is thus no difficulty in the way of our understanding the immense influence of land drainage on fertility.—*Gardener's Chronicle*.

FEEDING TURNIPS TO COWS.—If this is done morning and evening, immediately after milking, no taste of turnips will be discernable in the butter.

Spaying Cows.

Translated from the "Journal d'Agriculture Pratique."

A farmer has recently demanded that there should be a law made to prevent the slaughter of calves; it would be necessary to demand at the same time a law requiring the farmer to produce two, three, or four times the usual amount of forage. The second decree should at once follow the first, for we cannot suppose it would be possible for a farmer to keep or raise a calf when he has not food sufficient for it.

If we consume more of veal in France than in England, it is for the reason that we produce less roots and forage. Now in interdicting the slaughter of calves, we do not make the least gain in the world. Is it true that at the end of the year there remains a surplus of unconsumed forage? If not, it is not true that consumers are wanting.

This simple argument answers the objections which have been made to the spaying of cows.

"But you diminish the production of meat, you dry up the sources of public aliment."

Do you believe, then, that if we spay cows at the age of eight or ten years, after they have borne three or four calves, the quantity of edible meat will be diminished? It is probable that the number of calves will decrease, that is to say, the number of calves from old cows, and which are killed at six weeks old—animals of bad shape, with skeletons prominent with narrow chests and big bellies, poor consumptive beasts, children often of consumptive mothers.

There will be, perhaps, less veal, but more beef. It is not so much the number of animals killed upon which depends the quantity of edible meat, but the state of the animals as to their more or less perfect fattening. What advantage is there in having a mass of bones covered with muscular fibres containing neither juice or other nutritive qualities? What we do need is flesh, and good beef flesh, when at least it can be produced by the cow.

Do you not know that among domestic animals the flesh of the female is more tender and succulent than that of the male? To make the cow a better animal than the ox, we have but to do as with the male,—to take from them those organs which have become useless and which by their powerful influence upon the animal economy tend to prevent their taking on flesh.

We shall thus slaughter less poor cows and more good ones. There are old worn-out cows killed at fifteen or eighteen years of age, of which the flesh is hard, tough, and with but little nutritive quality, to the detriment of the reputation

of the beef of cows. But we are well convinced that the production of meat in place of being diminished will augment. Instead of losing nourishment in a bad machine which consumes much and returns nothing, we put roots and forage into an excellent apparatus which receives little and returns much. A beef animal is a machine to produce flesh, as the field is a machine to produce corn; there are good and bad animals in point of fattening, as there are good and bad fields in point of production.

Consider an unhappy man afflicted with a tape worm; he eats like an ogre and remains as thin as a nail; nothing profits him. Most old cows have a tape worm.

But the production of milk? you will say. Nourishment given to a spayed cow produces a double effect. It augments the production of milk at the same time that it predisposes the animal little by little to lay on fat; thus when the cow does not produce a quantity of milk sufficiently remunerative, she is found presently fatted and all ready for the butcher. A good spayed cow gives in the first year of milking four, five, and six thousand litres (quarts) of milk. These figures have been sufficiently established by the most unquestionable authorities.

The flow of milk is as abundant during the year as in the first days, and lasts much longer than with an ordinary cow. It has been estimated that for an ordinary milch cow receiving sufficient aliment, the augmentation of milk may be reckoned at the least at thirteen hundred and fifty litres.

On the other hand, the yield of milk is not only superior with spayed cows, not only is the fattening of these animals quicker, more easy and complete, but the milk will return a third more in butter and cheese, and the flesh is more succulent, tender, and more thoroughly penetrated with fat.

This double phenomenon is easily explained by the youth of the cow, by the distance from calving, by the placidity of the cow disembarrassed of the troubles caused by the rutting seasons. The digestion is always good, and the animal is always quiet, and all that it consumes goes to its profit.

In proportion as the time of calving grows distant, the milk becomes more equal and more homogeneous; it acquires, in a word, more of the quality of that which comes from a cow not spayed when she is in a state of perfect quiet.

But it is often very difficult, if not impossible, to obtain without spaying this state of quiet; above all, when we give much provender to ob-

tain large products. And if we prevent the covering of the cows, what disorders are produced in the milk functions from the fact that the natural desires are unsatisfied? How many cows contract then the terrible malady of hysteria or nymphomania? The number of cows "bull mad" can fairly be estimated at one-tenth, and all these cows are sick animals.

It is easy to render an account of the advantages offered by spaying cows under the report given of their milking qualities, when we know to what regimen the herdsmen in the vicinity of Paris submit their milch cows, to the end that they may relieve them of those affections which spaying makes completely and suddenly to disappear.

The milch cows of Paris receive abundant and succulent nourishment, but that which debilitates them and renders them lymphatic, and augments the quantity of milk to the detriment of its quality. They are confined permanently to stables, and never allowed to see the light, in order that the rutting season may be delayed as long as possible. They become rapidly consumptive, and produce poor milk during their period of lactation, and give, after they are slaughtered, flesh worse than the milk.

With spaying, the necessity of this unwholesome treatment ceases. The herdsman buys good cows after their third or fourth calving; he has them spayed, and puts them on good healthful treatment; he obtains more and better milk than from his poor and consumptive cows. When the milk diminishes the animal takes on fat, and is sold for a good price and in excellent condition.

These are the different considerations which have determined us after a long and serious study of all the facts gained by repeated experiments, to put the spaying of cows among the number of operations that it is needful to encourage among farmers.

REMEDY FOR THE GLANDERS.—Seeing an inquiry through the columns of the *Field and Fireside* by W. C. M., for a remedy for the glanders, I will give you my father's remedy, which he has used with success. Crude antimony, a piece about the size of a chinquapin, given in a little wheat bran, or some food readily eaten by the horse, once a week; the next morning a tablespoonful of sulphur; the following morning a tablespoonful of saltpetre; the fourth morning about half a teaspoonful of assafoetida; continue the above directions for several weeks after a horse has been infested with glanders.—*Corres. Southern Field and Fireside.*

Interesting Notes on the Peach, by a Lady.

I have read with much interest the letter from Mr. Dana, enclosed in your note of March 1st, describing the effects of the Red Spider on the Peach trees in Massachusetts, and also examined with great care the eggs on the peach bark sent with the letter. This species is new to me.

I have no doubt of the truth of Mr. Dana's statement, that trees so infested will, and must be victims to such a pest, and that those trees do die of the yellows; but that the Red Spider is the only cause of yellows, I must beg leave to doubt. After years of careful investigation, I have arrived at the conclusion that whatever impedes the healthy circulation of the sap of that delicate tree will produce the yellows; and then, generally speaking, death is inevitable, and the sooner the tree is cut down and burned, the better it will be for the fruit grower, as it saves time and trouble.

That the Red Spider is not the only cause of the yellows in the Peach tree can be proved beyond doubt, as all intelligent observers will agree, that whatever cause obstructs the natural flow of the sap, either in the spring or autumn, will produce disease in that delicately organized tree.

The Peach tree, like the grape vine, is supplied with a redundancy of sap, which pours into the large and tender sap vessels as soon as the first warm rays of the sun thaws the earth and quickens the sap in the roots; every bud swells, and the rushing sap struggles to expand itself in leaves and flowers. If this takes place prematurely, a severe frost follows, the sap freezing bursts the sap vessels, blights the leaf and flower buds, and a general disorganization of the functions of the tree follows. The sap, obstructed in its course, forms a thousand new channels, shoots out in numerous sickly yellow twigs, and oozes out in gum from every wound or split in the bark, then the tree must die.

The well known *Egeria exitosa*, or Peach Borer, is a fruitful source of the yellows in all the Middle and Southern States. This insect deposits her eggs in the bark near the roots of the Peach tree; the grubs soon hatch and penetrate into the sap vessels, on which they feed ferociously, gnawing their tortuous paths in and around the roots, cutting off the passage of the ascending sap. For a time the tree shows no signs of the concealed foe; but as the grubs grow large, and their paths widen, they girdle the tree; the branches then wither, and the sickly shoots in August show that death is inevitable. The grubs should have been taken out in July; it is

too late when the yellow, sickly shoots appear; then cut the tree down, burn it and kill the grubs, or you raise a family of enemies for the next year.

The *Tomicus liminaris*, a minute bark beetle, proves, when numerous, a deadly foe to the Peach tree. This little insect sometimes makes its presence felt rather than acknowledged; as, both in the grub and beetle form, it inhabits the bark, and seldom appears in the day time. Its flight is in the night, and it generally spreads from tree to tree, alighting on and infecting those branches and trees nearest the one first attacked. This, it is believed, is the infectious yellows.

A few years since, eighteen trees in my garden were destroyed in one summer by the *Tomicus liminaris*; the eggs were deposited in the sap vessels of the bark, all over the trees, and in one case not an inch of the bark escaped, from the top branch to the root; the irritation was extreme, somewhat analogous to the itch in the human skin. The obstructed, yet stimulated sap, threw itself out at every bud in sickly yellow twigs, and the tree died of exhaustion. The disease spread rapidly, and eighteen trees were destroyed before the cause was discovered. They had been carefully protected from the borer—*Aegeria*—and the dark green of the leaves in the spring showed there was nothing in the soil that disagreed with the roots. The trees were then cut down and burned, and the infectious yellows disappeared from the garden.

When Peach trees have been cultivated for years in the same garden, the soil becomes exhausted of the nourishment that is essential to them. Care should then be taken to remove the old soil, and replace it with such as is well known to agree with Peach trees. Sickly trees may then become healthy and bear good fruit; but seedlings raised from unhealthy will generally prove sickly, and die of the yellows.

In the neighborhood of Baltimore, the Peach is cultivated in great perfection and with little care; the soil of that region is rich in mineral salts, such as alum and saltpetre. Does not this lead to the supposition that a judicious mingling of these would be essential in a soil where these minerals are not found? And Peach growers frequently mingle both these salts with common salt, and sprinkle it around their trees, and if the trees are free from insects the result is always good.

If these observations, drawn from a life of experience in the culture of the Peach, can be of service to you, it will give great pleasure to your friend,
M. H. MORRIS.

[We insert this communication with great pleasure, as probably no one in the world has devoted more time and careful study to the subject than the distinguished authoress, and in acknowledgment of whose services in the cause of science, the Academy of Natural Sciences has recently conferred on her the degree of honorary membership—the first lady, we believe, who has been so honored by it. We have known Miss MORRIS' Peach trees to be heavily laden with fruit, when all others have failed in the vicinity, attesting the value of her views by their success; and our own experience confirms her suggestions on the importance of mineral manures.—Eds.]—*Gardener's Monthly*.

The Kitchen.

We will give to intellect, to immortality, to religion, and to all virtues, the honor that belongs to them. And still it may be boldly affirmed that economy, taste, skill, and neatness in the kitchen, have a great deal to do in making life happy and prosperous.

Nor is it indispensably necessary that a house should be filled with luxuries. All the qualifications for good housekeeping can be displayed as well on a small scale as on a large one.

A small house can be more easily kept clean than a palace. Economy is most needed in the absence of abundance.

Taste is as well displayed in placing the dishes on a pine table as in arranging the folds of a damask curtain.

And skillful cooking is as readily discovered in a nicely baked potato, or a respectable johnny-cake, as in a nut-brown sirloin or a brace of canvas-backs.

The charm of good housekeeping is in the order, economy and taste displayed in attention to little things; and these little things have a wonderful influence.

A dirty kitchen and bad cooking have driven many an one from home to seek for comfort and happiness somewhere else.

Domestic economy is a science—a theory of life which all sensible women ought to study and practice. None of our excellent girls are fit to be married until they are thoroughly educated in the deep and profound mysteries of the kitchen.

See to it, all ye who are mothers, that your daughters are all accomplished by an experimental knowledge of good housekeeping.—*Tennessee Farmer*.

If you hear a person saying that he has not a friend in the world, you may be sure that he does not deserve one.

Fairs for the Sale of Stock.

Farmers in various parts of the State are becoming convinced of the utility of *Fairs* for the sale of stock. In Madison county, a Fair of the kind is already an established institution. Loran and Trumbull counties have each made arrangements for such a Fair the present season. Of the benefit of such gatherings, there can scarcely be a doubt. The following are some of their advantages:

1. *More sales will be effected.*—A farmer has something to sell, which some one else wishes to buy, but without a Fair it will only be by accident that they find each other. But let every one who wishes to be a seller, and all who wish to purchase, meet face to face, and both classes may be accommodated. The seller will not be compelled to sell to disadvantage, because he knows of but a single man who will buy, nor will the buyer be compelled to give more than the worth of an article, under the impression that there are no others in market.

2. *A Fair saves travel.*—The seller need not set out on a wild goose-chase to find a purchaser, neither need the buyer travel hither and thither to find what he wants. A convenient time and central place being agreed on and publicly announced, a comparatively short journey will bring buyer and seller together, and much fruitless journeying about be avoided.

3. *Time is saved in bargaining.*—At Fairs, men do not sit on the fence and whittle for half a day. There is no time to lose; if one customer will not buy, the seller must look out for another; or if a buyer cannot obtain this animal at a price which suits him, he must try that before some one else has purchased it. All this favors dispatch in the mode of doing business. Why may not a farmer learn to make a bargain as promptly as a merchant in a store?

4. *A Fair gives opportunity for selection.*—The man who wishes to purchase a brood mare, or a working horse, or a cow, probably has in his mind an idea of the animal he wants, but in his neighborhood or within the range of his acquaintance, he knows of no such animal. At a Fair, there will probably be many animals belonging to the same class, and some among them may be precisely what he wishes; at any rate, the Fair gives him a better chance than he would otherwise have.

5. *A Fair secures greater uniformity of price.*—Honest men do not always know the market value of the article they have to sell. Some would expect too much, others would be satisfied with less than the real worth. Justice and fair

dealing will be promoted by giving to all, both sellers and buyers, the benefit of comparing articles and prices, and the prices demanded, with actual sales.

In the spring of the year, team horses, working oxen, milking cows, fat cattle and sheep, young cattle and swine, are often needed by those who had not conveniences for wintering them. Such animals may be brought to a Fair, and all the purchases needed for the accommodation of an extensive region of country may be made in a single day.—*Ohio Farmer.*

Rule for Predicting the Weather.

About a year ago we mentioned, without attaching much credit to it, an empirical rule by which the weather might be predicted with tolerable certainty during the last twenty-four or twenty-five days of a month, from that which prevailed during the former ones. This rule is now, however, again brought forward with such additional arguments in its favor as to induce us to return to the subject. It appears that it was the late Marshal Bugeaud who discovered it in an old Spanish manuscript; he was struck with the great number of observations from which it had been deduced, extending over more than fifty years, and resolved to verify it himself.—The result of his observations was so satisfactory that he soon got into the habit in Algeria of consulting the rule on all occasions when some important military or agricultural operation was in contemplation. The rule is as follows: "Eleven times out of twelve the weather will, during the whole lunation, be the same as that which occurred on the fifth day of that moon, if on the sixth the weather was the same as on the fifth. And nine times out of twelve the weather of the fourth day will last throughout the moon, if the sixth turns out to be like the fourth." The Marshal used to add six hours to the sixth day before pronouncing on the weather, in order to make up for the daily retardation of the moon between two passages across the meridian. It is clear that this rule may not be always applicable, there being nothing to prevent the sixth day from being quite different from the fourth and fifth. M. de Conluck, of Havre, has just published his observations, continued for ten months, and which completely confirm the rule.—*Galignani's Messenger.*

COCOA NUT CAKES.—Two grated nuts, an equal weight of powdered white sugar, the whites of three eggs, well beaten; make them the size of a half-dollar, and bake on buttered tins.

Ice Houses Above Ground.

A subscriber at Richmond requests us to invite information as to the best plan of building Ice Houses above ground. Will some of our readers be good enough to respond to the inquiry. In the meantime we copy the following, which was furnished by a subscriber to the *Southern Field and Fireside*:

MESSRS. EDITORS: In looking over the columns of your valuable paper of 23d June, I perceive an enquiry from "J. M.," of Mountville, S. C., for the most approved plan of building an ice house. Having had some experience in constructing ice houses, I think I can give a plan that will answer the purpose well, beyond any doubt, as there are many houses in this part of Virginia built upon the plan I shall suggest, and all answer well—keeping ice as long as required, besides furnishing a dairy attached with the ice-drippings, making it equal in every respect to the best flowing-spring dairy.

In the first place, the ground upon which the house is to stand should, if possible, be a sloping hill side, falling about three feet in thirty; the house should stand on twenty locust blocks or stone pillars; the size of house can be in accordance with the quantity of ice required. Fourteen feet square in the clear is large enough to supply two families, and will contain about fifty tons of ice. The walls of house should be one foot in thickness, filled in and crammed tight with fine charcoal dust gathered from a forge, furnace, or coal hearths—charcoal being the very best non-conductor of heat that can be used in constructing an ice house. Sawdust is recommended by some, but charcoal is certainly preferable. The walls, if made of sawdust, would have to be much thicker than of charcoal—say two feet. The floor of house should also be filled with charcoal ten inches thick, the roof and gable-ends six inches, with several small openings at each end of house to admit a free current of fresh air to pass over the ice. The walls of house should be made with a double row of studding, three by four inches in size—the sills and plates to be twelve inches wide—the studding to set diagonally opposite to each other on each side of the sill and plate, leaving the space of twelve inches to receive the coal dust. The floor of house is also double, the lower floor of inch plank, and upper one of two-inch plank, upon which lays the whole weight of ice. This bottom should be well supported with sleepers, two feet apart, six by ten inches in size, and three large girders, twelve inches square, running across the building to support the bottom. The

The weight upon the bottom when filled with ice is great, and care should be taken to have it strong. The floor of house should have ten inches' fall towards the dairy, so the drippings from the ice will get away from it as quick as possible. The dairy should be eight feet wide and framed to the ice house—the dairy part to be two and a half feet lower than the ice house, so the drippings from the ice will fall into a large trough which will be constantly filled with ice water, making it an admirable place for butter, milk, fresh meats, etc., during the hot summer months. The walls and floor of the dairy should be filled with charcoal dust the same as ice house; two stick windows should be in the dairy, opposite each other, with shutters, to ventilate the dairy freely; a platform, four by seven feet, should be erected at upper side of ice house, to throw the ice upon from the wagon, and then into the door at the end of the house; this door should be above the plate of house, and two and a half by three feet, made of laths in part, to admit air; a pair of open steps can run from ground to platform, for convenience of getting out ice; this platform should be on the upper side of the hill, as it will give an advantage in unloading ice.

The timbers used in constructing an ice house should be of the hardest and best kind. All kinds of oak are much better than pine—pine being open, porous and soft, will receive the dampness from the house and rot soon. Black, red, or swamp oak is good timber for an ice house. The best plan for putting up ice is, when less than three inches thick, break it up fine as possible when hauled, and throw water upon it to make it unite in one solid mass; when over three inches, it can be packed in, in layers, and does very well.

If "J. M." will follow out this plan, I know he will have an ice house and dairy that will furnish him the *greatest* luxuries during the hot months. Any other information he may desire in regard to ice houses, by dropping a line to my address, I will take pleasure in transmitting to him. E. S. K.

Cross Keys, Va., July 2, 1860.

• PACKING EGGS.—Take the barrel, or tub, and put a layer of ground plaster in the bottom; then take the eggs, set them up on the ends—don't have them so they will hit each other—then add more plaster; then another layer of the eggs; and so on until the vessel is full. Set them where they will keep dry, and in the spring you will have a plenty of fresh eggs on hand.—*Ex.*

Importance of Salt in Agriculture.

If we should ask why so enormous a quantity of this inestimable gift of salt is distributed throughout the earth; why three-fourths of the surface of the planet designed for the home of man is covered with it? the answer would be: in order to preserve the work of nature, to enable man the more readily to sustain himself, and to make him wealthier and better. It has become an indispensable condition for the existence of man, and his civilization. In all organic beings we meet with two processes—that of life and that of decomposition—the latter beginning its full activity after the former has achieved its end, at the moment when organic beings are dissolved into those constituents from which the plant was formed and nourished.

If, however, we intend to check, or, at least, delay decomposition, we must employ acids, for we know that the Creator formed of the sea-salt a mighty barrier against the immeasurable mass of water becoming putrid; we know that our stocks of flesh, grease, &c., are preserved by the application of salt; that cabbage-water, acids in general, and kitchen-salt are the means employed by the agriculturist against septic diseases in our domestic animals, and against diseases of the mouth and feet. The separation of milk and deposit of meat will be increased by the application of salt, thus forming an essential means for the promotion of cattle-raising. By the application of salt, the fruits, especially wine, will become much better; and even the ancients were in the habit of throwing salt on their grounds, their vineyards, and fruit trees. Agricultural chemistry informs us that the simplest combinations through which nourishment is conveyed to plants consist in acids, alkalies, and alkaline substances. Animal chemistry shows that free muriatic acid and kitchen-salt form the principal constituents of the contents of the stomach.

In a French prize paper, by Dr. Desaive, on the manifold advantages of the use of salt in agriculture, the following results have been laid down by the celebrated French veterinary surgeon, Grognez:

Common salt serves as a preventive of the fermentation and heating of hay, which has been heaped up in large stacks during wet weather. Forty quintals of hay require fifteen pounds of salt, to be strewn among it in alternate layers.

This effect is much better shown in straw, which, if intended to be used as fodder, by being moistened with salt-water, may be preserved for a long time, when it can be given to cattle instead of hay, a method in use among the ancients.

Leaves of trees, when put in ditches with salt, may be prevented for a long time from putrefactive fermentation, and will even make good forage. Intelligent farmers of the Mont d'Orlyonnais are in the habit of thus preserving their vine leaves as fodder for goats.

Fodder of inferior quality, for instance, straw, or other kinds, soaked and bleached by rain and sun, cured too late, or become woody, may be rendered more palatable and easy of digestion by being salted. A pound of salt in three quintals of water is required for a quintal of bad hay.

The sharp taste which the milk of cows usually assumes in consequence of beets, turnips, and white cabbage being continually fed to them, can be removed by salting those vegetables.

In Flanders, common salt is strewn on new and wet oats, to be fed to horses, and, thus prepared, will not be dangerous to the animals. The same application may also be made to hay newly harvested, to prevent injuries when it may become necessary to feed such hay, the moisture of which has not been fully evaporated.

Though the bad qualities of dusty, muddy, or moldy fodder, after having been washed and threshed, are not entirely removed, yet, by giving a sprinkling of salt-water, they will be diminished to a considerable degree. This fact will be of advantage to the farmer whenever he may be in want of appropriate fodder.

By means of salt, such water as otherwise could not be used for cattle for drinking, will be rendered proper.

The great advantages to be derived from common salt with regard to the health of cattle have been clearly shown by many experiments made by that learned and celebrated agriculturist of Alsace, M. Boussingault. Cattle, by being fed with salt, receive a soft and glossy skin, their digestion and appetite are in good order, and they increase in flesh and strength. Cows thus fed yield much milk, while those treated otherwise have dull skins, with rough hairs, exhibit less appetite, produce a smaller amount of flesh, and yield not only an inferior quantity, but also quality, of milk.

Manure from cattle fed with salted fodder is also of a better quality.

Finally, manuring with salt will banish mosses and hurtful parasitical plants from meadows.—*U. S. Patent Office Report.*

IRON A CURE FOR THE CATTLE DISTEMPER.—Late foreign papers state that marked cases of the pleuro-pneumonia in France were completely cured in twelve days with sulphate of iron.



DESIGN FOR A SUBURBAN VILLA.

There seems to be a demand at present for a class of houses of moderate size and accommodation, suitable for residences in the neighborhood of cities, and which can be built for a small outlay—say from \$3,000 to \$5,000. In our present design we have given an example of this class of dwelling, and as its situation demands, have given it more architectural finish than any of our former designs.

No. 1 is the front entrance portico, opening into the hall, No. 2, 8 feet wide, and containing front stairs to chambers. The first door on the left opens into the parlor, No. 3, 15 feet by 20, lighted by two mullioned windows, one of which reaches to the floor and opens upon the veranda, No. 5. The library, No. 4, is 13 feet by 15, and opens upon the veranda in the same manner as the parlor. No. 6, the dining hall, measures 15 feet by 17½, and contains a large closet, No. 9, fitted up with a dumb waiter rising from the kitchen below. No. 7, the back entry, measures 6 feet by 16, contains stairs to chambers and basement floors, and opens upon a gallery, No. 10, leading to the yard; under the gallery is the yard entrance to the basement.

The second floor contains four good sized chambers with bathing rooms, dressing-rooms and closets.

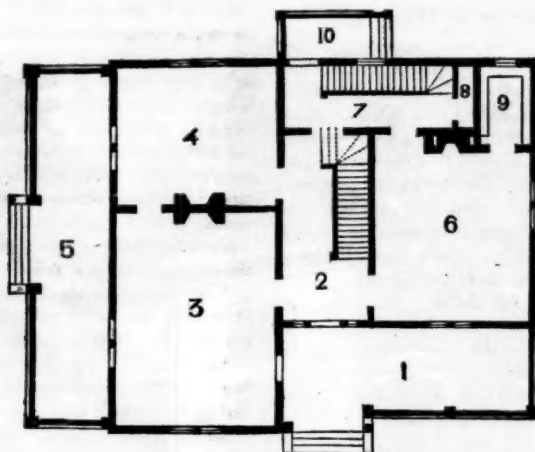
In the attic, which should be finished throughout, will be three large bedrooms, besides a storage for trunks, &c. The first story is 11 feet high in clear, and the second 9½ feet.

Construction.—This dwelling is to be built of wood, and should be finished in a thorough, substantial manner, inside and out. It may be covered in the horizontal manner with matched sheathing or with clapboards, either method being appropriate to this style of building, though the former, which is also rather more expensive, gives the appearance of a greater degree of finish than the latter.

The French roof may be covered with semicircular patterned shingles. There should be a cornice run through all the principal rooms. The architraves of the windows and doors, and the balusters, post and rail of the front staircase should be of simple but heavy designs. The walls are to be prepared for papering.

Cost.—Such a building as the above could be built complete for about \$4,000.

[For engraving of Plan of Principal Floor, see next page.]



PLAN OF PRINCIPAL FLOOR.

Ashes.

"Would you advise the mixing of unleached wood ashes with barn-yard manure?" says one. "With Peruvian guano?" says another. "With nitrogenized phosphates?" says a third. We answer to all, "no." Unleached wood ashes have a much higher value as a manure than is usually accredited to them, and they should never be mixed with top-dressing manures, as they force out the ammoniacal portions while decomposing the organic portions. Wood ashes unleached are worth in many districts, as a manure, fifty cents per bushel, when they are sold to soap boilers at twenty-five cents. These farmers, if they would treat themselves as they are treating their soils, would be bled once a day instead of repudiating the Sangrado. Unleached wood ashes contain large amounts of potash, and exactly in that condition most available to a majority of crops. When mixed with swamp-muck, river-mud, woods-earth, chip-manure, head-lands, weeds, etc., wood ashes assist materially in their disintegration, and in the development of their inorganic constituents to a condition capable of feeding crops, but when mixed with stable manures the decomposition is too rapid to permit the absorption of the ammonia, by the less valuable portions. When soils are deficient of potash—and we have yet to find the soil that is not—wood ashes may be sown directly on the surface, and the potash contained in them will find its way into the soil by the action of dews and rains, and as it is not volatile, the surface of the

soil is the proper place for its deposit. It is true that it may find its way to the soil through compost, composed of otherwise inert materials; thus, spent tan may be reduced by the potash to a fine powder, well suited after such treatment for composting with stable manures, which in turn, will be rendered in a better condition for the use of plants. Thus the potash performs the double service: first of forwarding the decomposition of inert matter, and secondly, of furnishing potash eventually to the soil; but it should never be brought in contact before its application to the soil, with manures of a highly putrescent character, nor with artificial manures containing ammonia in any form.

As a top-dressing for grape vines, wood ashes are very valuable.

The difference between leached and unleached wood ashes is very great; for the soap boiler not only abstracts all the caustic potash the ashes are capable of yielding by lixiviation, but he composes with it caustic lime, so as to render all the carbonates capable of rendering up their alkalis; and thus leached ashes contain no potash for the use of the farmer. Their chief value consists in a minute portion of phosphate of lime, much less than could be bought, for one-fifth the money directly in the form of potash phosphate of lime.—*Working Farmer.*

Old men's lives are lengthened shadows; the evening sun falls coldly on the earth, but the shadows all point to the morning.

Old Mortar as Manure.

The question is often asked, why "Old Mortar, Plaster, &c.," acts so beneficially as manure, and is as often answered, "because it contains nitrate of potash, (saltpetre)" but the formation of this salt in old mortar is not so well understood. The following will give the rationale, &c.

During the French Revolution there arose a demand for saltpetre, which could not be obtained by importation; it was therefore desirable to find some local supply of this important ingredient in the manufacture of gunpowder. A premium was offered for the most economical and convenient methods of manufacturing nitrate of potash. It was soon discovered that the plaster from old walls contained this substance in large quantities, and that by pulverization and lixiviation it might be readily extracted.

This method of obtaining it was the one adopted by the French government, and to facilitate this branch of manufacture, a law was passed directing that all the plaster and mortar of old buildings should be preserved for this purpose. The question now arises, how did this saltpetre get into this mortar, inasmuch as it formed no part of the original mass when first compounded. Mortar is usually made of sand, lime, and some hair, to give the mortar tenacity. Hair is an animal substance, and in common with other animal substances, prone to decay, particularly when assisted by the presence of lime. Hair contains considerable quantities of nitrogen, which, by the absorption of oxygen, may be converted into nitric acid. This nitric acid, if there be any potash present, is instantly absorbed by it, and nitrate of potash is the result; any excess of acid will be next taken up by the lime of the mortar, and nitrate of lime is produced. This salt is always present in the plaster, to a much larger extent than the nitrate of potash, but by dissolving it out and adding wood ashes, the nitrate of lime is decomposed, nitrate of potash formed, and the lime set free. In this manner all the nitric acid of the animal matter is made available, in the most simple and convenient manner. A small proportion of animal matter is enough to produce a considerable quantity of potash, inasmuch as every atom of nitrogen that is disengaged during the decomposition of animal matter of any kind, requires five atoms of oxygen to become nitric acid, consequently one part of nitrogen becomes in this process, six parts of nitric acid in their turn, by uniting with an equal quantity of potash, become twelve atoms of parts by weight, of nitrate of potash.

It is not by any means essential that this sub-

stance, to be obtained readily, should be formed by the decomposition of old plaster; in many countries, and in Sweden particularly, it is formed in large quantities in what are called nitre beds, or heaps of compost of various kinds, containing as an essential ingredient animal matter and lime. In these heaps the animal matter decomposes with much rapidity, and gives rise to large quantities of nitrate of potash; this nitrate of potash, as all know, is one of the ingredients of gunpowder, forming about seventy-five parts of the weight of rifle powder; but it has another and quite as important application—the renovation of the soil; nitrate of potash is very valuable as a means of adding nitrogen to the soil, and thence to the plants growing upon it; and there is no doubt but that it is formed to a considerable extent in all compost heaps where animal matter is present in a state of decay, and probably to this some of the fertilizing powers of these composts may be owing; and it might be profitable to any person whose soil was deficient in nitrogen, to add the crude saltpetre to his soil, particularly if he was unable to obtain a sufficient quantity of animal matter; in case nitrate of potash cannot be had, the cubical nitre or nitrate of soda, a much cheaper article, might with economy be substituted.

But it may with propriety be inquired—suppose that the mortar or old plaster, as the case may be, should contain no hair or animal substance, introduced at the time when the materials were first added together, would the mortar when old, contain as before, nitrate of potash. It would, but certainly not to the same extent as before, and from a different cause: this, as far as understood, is thought to be the production of a peculiar species of microscopic fungus, which is propagated in the mass of plaster, and which has the power of assimilating and collecting to itself the nitrogen of the atmosphere; these fungi as they die, decompose, and yield the nitrogen they contain as nitric acid, which combines with the potash or lime as before; these fungi are produced in the greatest abundance in basements, cellars, and other low and damp places, inasmuch as we find that the plaster of such situations contain always more of these materials than those of more airy locations, in fact, ventilation and dryness are almost sure preventives of all species of fungus growth.—*Working Farmer.*

Little drops of rain brighten the meadows, and little acts of kindness brighten the world.

What good would centuries do the man who only knows how to waste his time?

The American Farmer.

Baltimore, September 1, 1860.

TERMS OF THE AMERICAN FARMER.

Per Annum, \$1 in advance—6 copies for \$5—10 copies for \$8.

ADVERTISEMENTS—payable quarterly in advance—eight lines of small type constitute a square:

Size.	1 Mo.	2 Mo.	3 Mo.	6 Mo.	1 Year.
One Square	\$1.00	\$2.00	\$3.00	\$6.00	\$10.00
Half Page.	10.00	20.00	25.00	40.00	60.00
One Page..	15.00	28.00	40.00	60.00	100.00

N. B. WORTHINGTON.

THOS. B. LEWIS.

WORTHINGTON & LEWIS,

Publishers of the "American Farmer,"

CARROLL HALL, S. E. Corner Baltimore and

Calvert streets, Baltimore.

Mr. Wm. C. LIPSCOMB, JR., is our Traveling Agent for Maryland and Virginia.

Our Business Agency.

The great pressure on our advertising sheet fills the fifty-one pages devoted to that sort of matter, and excludes our own advertisement with those of several of our dilatory friends. We would only say therefore that we continue to furnish Peruvian Guano from the warehouse of the Peruvian Agency at the lowest price of the market for a pure article, the best Ground Bones, all the Guanoes, and any of the Manipulated Guanoes or Superphosphates, &c., of reliable character, at the manufacturers prices. Also, Fruit Trees, Stock of the improved breeds, &c.

We take pleasure in calling attention to the communication of Professor Johns of the Agricultural College, and beg that our friends will promptly respond to his call upon them in a matter of much importance to themselves and the College.

Dr. Johns is the newly elected Professor of Agricultural Science, &c., in our College. It will introduce him, we know, to the kindly regards of a large number of our readers to say, that he is a son of the late Rev. Dr. H. V. D. Johns, the highly esteemed Rector of Emmanuel Church, Baltimore, and a nephew of the venerable Bishop Johns of Virginia.

Death of Mr. Hussey.

We announce with great regret the melancholy death of Mr. Obed Hussey, the inventor of the celebrated Reaper and Mower which bears his name.

While travelling with his family in the Eastern States, by a misstep in getting on the train of cars while in motion, he was thrown under the wheels and instantly killed.

Mr. Hussey, though a native of one of the New England States, has for more than 30 years resided in Baltimore, where he has always manufactured the invaluable Reaper, by the invention of which the grain growing community are laid under unending obligations to him. He was a most worthy man, singularly modest and unobtrusive in his manners, upright and honest, and has earned for himself the character of one of the world's benefactors.

It is one of the inscrutable Providences which we often meet with, that after many years of unrequited toil, when he had just begun to realise large returns and ample rewards, with a young family starting up around him, and while yet a hale and hearty man, he should be so suddenly cut off by a violent and unlooked for death.

The Sword or the Plough?

We are honored with a commission from the ladies of Montgomery county, Maryland, through Richard J. Bowie, Esq., to purchase for them a handsome banner with appropriate inscription to be presented to the Agricultural Society of that county at its annual exhibition at Rockville on the 13th and 14th September.

We were impressed recently with the beautiful address of a young lady of Anne Arundel county, who presented a banner in behalf of the ladies to a military company of that county, but the ladies of Montgomery have made a shrewd movement in advance of them. In Anne Arundel they honor those who volunteer for the defence of their homes and firesides, in Montgomery, those who build up the homes and make them beautiful and happy. When this is done, is not the other made doubly sure?

Let it be said however, in behalf of the Anne Arundel ladies, that the Anne Arundel gentlemen have no Agricultural Society!

American Pomological Society.

We beg to call attention to the fact that the American Pomological Society will hold its Eighth Annual Session in the city of Philadelphia on the 11th of September, beginning at 10 o'clock of that day and continuing through several days. The great interest excited within a few years past in the subject of fruit growing, will make this a very interesting occasion to a large number of our readers, and we hope to find them largely represented.

Fertilizers.

We have had numerous communications and reports as to several Fertilizers advertized in our columns, which we should take pleasure in noticing more at large, if our crowded columns allowed. J. C. Nevett, of Alexandria, Agent for J. J. & F. Turner, of this city, sends us his circular, containing a number of very strong testimonials as to the efficiency of the "Excelsior" Superphosphate. In addition to which, we learn that this article is highly commended by Mr. David Dickson, an extensive cotton planter, of Sparta, Ga., who used it largely last season, and has ordered more largely again. A large farmer in Baltimore Co. has called on us to testify to the extraordinary effect of 150 lbs. to the acre, of Rhodes' well known Superphosphate, on his crop of oats. The Agents of the American Guano Company, Messrs. Angell & Co., assure us of the very successful use of their Guano the past season.

Our advertizing friends, each honestly believing his own article the best, are naturally desirous that we should take the same view of the matter, and give our readers an intimation to that effect. Apart from the inherent difficulty of deciding, when all are apparently good, we have good reason for wishing rather that they speak for themselves, and let the readers of the Farmer judge between them. We do not doubt at all the value of some of the articles offered for sale, both of Manipulated Guanoes, Superphosphates, and natural Guanoes, though their quality is doubtless modified by circumstances of soil and season. Let our readers peruse carefully every advertisement and choose for themselves.

State Fairs for 1860.

The dates of the several State Fairs, so far as we are able to ascertain, are as follows:

Maryland, at Baltimore.....	Oct. 30 to Nov. 3, inclusive.
Virginia..... Richmond....	Oct. 22 to 28, "
N. Carolina... Raleigh.....	Oct. 16 to 19, "
Georgia..... Atlanta.....	Oct. 22 to 27, "
Alabama..... Montgomery....	Oct. 29 to Nov. 2, "
Tennessee Nashville	Sep. 10 to 15, "
Kentucky .. .Bow'g Green..	Sep. 18 to 22, "
Mississippi..... Holly Spr'gs....	Oct. 16 to 20, "
Missouri..... St. Louis.....	Sep. 24 to 30, "
S. Carolina.... Columbia.....	Nov 13 to 16, "
New York.... Elmira.....	Oct. 2 to 5, "
Pennsylvania. Wilkesbarre....	Sep. 24 to 27, "
Wisconsin.... Madison.....	Sep. 24 to 29, "
New Jersey... Elizabeth	Sep. 4 to 7, "

NOTICES OF BOOKS, PAMPHLETS, &c., are necessarily excluded from this number.

Peaches and Other Things.

While the cry of "peaches! ripe peaches!" is not heard in our streets, our friend at "Severn Side" is luxuriating on the best the earth can afford, and receives five dollars a bushel for such as he sends to market. We speak not without experience of their quality—a well filled basket which met us very unexpectedly at Gott's Station within a few days, having afforded ample opportunity.

But we have a word for fruit growers in this connection. We need not, we suppose, inform them that the peaches have failed this year, and that of late years they are very apt to fail. As this very basket was handed us into the cars, a traveling companion wofully exclaimed—"and I have spent three hundred dollars in trees, and haven't a peach!"

Around the beautiful bay into which the beautiful Severn widens, about five miles above the Naval Academy at Annapolis, is a range of high land which is singularly exempted from damage by frosts. Its elevation and proximity to salt water combine, perhaps, to afford this protection, while a warm and genial soil is admirably suited to the growth of the most valuable fruits. Whatever the cause may be, the fact (which was well known before) is forcibly attested in this remarkable season, by the success of crops which elsewhere have so generally failed. "Severn Side," the attractive residence of Major Giddings, lies on this bay, and with beauty of location joins peculiar adaptation to the growth of crops which, though precarious elsewhere, ought, under proper treatment here, to be profitable beyond all comparison with ordinary farm crops. This property, with its already extensive plantations of peaches, grapes and other desirable fruit, is offered for sale at a very moderate price. We wish to call the especial notice of fruit growers to it, and to all the lands lying around this bay, as of peculiar value for their purposes.

We call attention to the advertisement of this farm, and to that of grape roots and cuttings. We can give our readers assurance as to the quality of these.

"SNAP" BEANS IN WINTER.—The editor of the *Germantown Telegraph*, in his Garden Hints on the 15th of August, says: "The last crop of 'Snap' Beans should now be sown—to be gathered late in the season, to preserve in salt and water for winter. We ate some last February put up in this way, about as tender and fresh as if just taken from the vines." The salt keeps them "fresh." We shall try it and report next season.—ED. AMER. FARMER.

Crops in Maryland.

In addition to Mr. Oden Bowie's Report to the State Agricultural Society published last month, we have received from the Secretary the following:

L. Tiernan Brien, Esq., Vice President for Washington county, writes July 30th, "I would say for Washington county, that the crops of wheat, oats and hay, have not been nearly so good for many years as this season, and the corn promises so far to yield very well. The wheat crop in the aggregate has rarely been excelled here for quantity and quality."

Richard C. Tilghman, Esq., Vice President for Queen Ann's county, writes August 4th, "I have made careful enquiry of persons from different sections of the county, and with the almost invariable result, that not more than half a crop of wheat has been made in this county. The wheat too is generally of poor quality. In addition to the general causes of failure, a destructive hail storm passed through the centre of the county on the evening of the 4th of June, destroying many thousand bushels. I regret to add that the prospect for a crop of corn is still more unpromising."

John W. Jenkins, Esq., Vice President for Charles county, writes August 7th, "From the most extensive and accurate observation I could make as well as from reliable information from gentlemen in different sections of the county I cannot estimate the yield of this year above *the half* of what may have been reasonably expected. Though much of the grain is small, the quality in general is good. The corn has been, and is, suffering from want of rain and must of necessity be very deficient. The oat crop is the best made for many years. Tobacco never looked worse at this season, and probably not two thirds of the usual annual weight will be realized. A good deal of well prepared land remains unplanted."

Mr. James M. Jacobs, Vice President for Harford county, sends the report of the lower part of that county of Mr. T. S. Dallam, United States Marshal. "I am of the impression that about half a crop has been made. The principal diseases were *rust* and *wheat*, the late sown wheat suffering badly."

Dr. Samuel P. Smith, Vice President for Alleghany county, writes as follows, August 16th:

"Our wheat crop, where the Mediterranean was seeded is rather over an average crop, and of very fine quality, weighing from 62 to 64 lbs. per bushel. All smooth wheat more or less injured by the midge, fortunately but little seeded last fall.

Rye very superior in quality, and a very full crop. The corn crop, where it was planted early is generally very good—some portions of the county suffered from drought, and leave a small yield in the uplands. Oats in this portion of the county very fine. The Glades or western portion of this county promise a very fine oat crop, it is not yet gathered—I have never seen the growth of the Glades so luxuriant as at present. Grass very heavy, yielding from 1½ to 2½ tons of hay to the acre, after pasturing from the 1st of April to this time, hundreds of cattle roaming at large in grass from two to three feet high. The prospect for buckwheat and potatoes, very fine indeed, and unless the former is injured by frost will be very large. The Glades is a delightful part of our county for a summer retreat—think of cattle being herded from the 1st of April to the 10th of October, for \$1 per head and salt found by the herder—I deferred this report until I had visited the Glades.

Rye, oats, buckwheat and potatoes, raised in the Glades, is greatly superior to the same articles raised in this vicinity—oats fully 20 per cent. by weight heavier."

The Cranberry.

Those who intend planting this very valuable berry are reminded that the month of October is a favourable season for planting, and those who wish to get their plants from us, are requested to send their orders as early as they can conveniently do so, with directions as to sending. There is no difficulty in sending the plants, perfectly preserved, to any part of the country. One of our subscribers, to whom we sent plants in March, informs us that they bore fruit this season.

The Cranberry, while it is exceedingly productive when grown under favourable circumstances and sells at a high price, has peculiar advantages over all the other small fruits in the fact that it does not require gathering and putting in market immediately when ripe, but may be gathered as leisurely as a crop of winter apples and sent to market a week or a month afterwards. They are more easily propagated than strawberries, and a few plants will soon furnish a large supply of runners. Price \$5 per thousand, \$1 per hundred. We will give in our October number particular information as to their management.

The Executive Committee of the Maryland State Agricultural Society will meet in Baltimore on Tuesday, 4th day of September.

LOUDON COUNTY (VA.) AGRICULTURAL SOCIETY.
—This Society will hold its Annual Fair on the 5th, 6th and 7th of September.

Roots—Wheat Roots.

We fear our cultivators do not yet understand the office, or appreciate the value, of Roots. We do not mean beet roots, that the French make sugar from, nor the turnip root, that John Bull makes beef and mutton of, nor the carrot, of which Professor Mapes makes very big crops, and which contain "pectic acid," so wholesome for horses. We are not talking of root crops at all, but of roots. We would have our readers understand, and believe in, the value of roots in general, and now, in this month of September, of wheat roots in particular. A few remarks on this subject, made last month, we are pleased to find, have attracted notice. Professor Baer, who likes to go to the root of a matter, has brought us some specimens of rye affected in the most remarkable degree with the disease known as Ergot, and which he attributes to late sowing and imperfect culture, and their result, deficiency of roots. Also a number of millet plants, with root, stem and head entire, showing the exact proportion between the head and the root.

To a person who considers this matter of the necessity of a good growth of roots, it seems too simple a thing to call attention to at all in the way of argument. But we are convinced that enormous losses, especially in the crop of wheat, are due to the fact that we ignore the necessity of ample roots to ensure an abundant crop of grain.

We allow ourselves to be deceived by appearances in this as in other matters. A late sown crop of wheat, on good ground, will shoot up on the approach of warm weather and make as fair a show of straw, perhaps, as the early sown, but we have never seen, or heard of, a maximum crop from late seeding. Apart from all the disasters peculiar to a late crop, it has not a supply of roots *capable of bearing a crop*.

The fact that the growth of straw and stalk is not so dependent on the root, is familiar to the practical man. A heavy growth of straw and poor turnout of grain, is of frequent occurrence. The corn grower knows well that early planted corn, while its growth above ground is seriously checked by a cold atmosphere, is still pushing out its roots in the warmer earth, while that which is planted late (say 1st of June in this latitude,) will spring up rapidly and make as much show of fodder, perhaps, as the other, but it will want the roots to make a full crop of grain. The tobacco planter is still more familiar with the frequent disproportion between the root and leaf of the plant. He chooses always to sow his seed at the earliest time that the ground can be got in

order, and knows that plants subjected to the changes and checks of early spring, are still forming their roots under ground, while the late sown seed will come up quickly, grow rapidly, and make perhaps as much show of leaf by planting time, but will be deficient in root. He will take his chance for a crop, rather with the yellow, stunted growth, and big root, than with the large, green, vigorous looking leaf and small root.

With regard to the wheat plant, we overlook the fact that it is biennial, or one of those plants which form their roots and leaves one year, and their seed or fruit the second. True, wheat will mature when sown in spring, and so far take the character of an annual, but who ever saw a large crop of spring wheat? It is a very poor substitute for winter wheat when the latter cannot be grown, deficient in quantity and defective in quality. So will a parsnip go through both stages of its growth in one year, making both root and seed, but neither of good quality. It is the nature of such plants to form the roots one year from which the seed is to be grown the next, and they should have all the circumstances of time, fertility and cultivation necessary to a maximum growth the first season, if we would have a maximum growth the second season.

Therefore we urge continually the importance of early seeding of wheat, even without reference to the disasters of winter killing, rust, mildew, &c., to which late sowing is doubly liable. We would sow early, because we would have *roots enough for a maximum growth of seed*. For the same reason, whether early or late, we would use at least fifty pounds of Peruvian Guano, (without question the best fertilizer *for that purpose*,) in the drill, that the roots may have at once their proper nutriment. For our own part, we would sow early, and sow right, and defy the fly; but let those who are timid, at least have everything in thorough order to sow in this latitude by the 5th of October, and then lose not an hour.

♦♦♦
A FEW HINTS TO FARMER'S WIVES IN REGARD TO FRUIT.—An excellent communication under this caption from a North Carolina Matron is received at too late a day for this number, but shall have place in the next. Will our friends let us have their communications by the 15th of the month to be sure of getting them in.

♦♦♦
We are indebted to Mr. Jones, of Baltimore county, for some very handsome specimens of Italian Barley, from seeds obtained through us from the U. S. Patent Office.

The White Chesters.

A friend, on whose sincerity we have perfect reliance, and who, we are bound to say, has some very nice Chester Pigs for sale, writes as follows:

"I find that my *Chesters* eat very little—much less than the common hogs. A thriving young sow, six months old, has never been known to eat a whole ear of corn at a time, even after fasting half a day—while a very large sow, with seven pigs, is found to be much more easily satisfied with food than a common sow without pigs, and not half as large. A neighbour of mine thinks that his hogs of the common breed are *smaller than they were a year ago*, and another, that it costs more to fatten his than the pork is worth; while several others are known to have given up raising pork altogether, on account of the trouble and expense of confining and feeding their hogs. Would it not be better for all these to try the Chesters? If you think these facts likely to be useful to any of your readers, you are at liberty to publish them, and perhaps it ought to be done in justice to this very valuable breed of hogs."

We are willing to do the Chesters ample justice. The comparison with them of which we spoke in our first article on the subject, was not made with that "common breed" our correspondent mentions, of which, in his neighbour's experience, the specimens are "smaller now than they were a year ago." We had an excellent stock of country hogs, black, red or tawney, and blue colored, hardy, thrifty animals, that with very little care, and in good pasture or other range, gave us very good hogs. It is no doubt a cross made years back on the common country hog with some very good improved breed, and which had combined with many good points of the improved breed, the healthy, vigorous constitution, which high bred animals are apt to be deficient in. If that "common breed" our correspondent speaks of, has had any chance at eating, or even "rooting," (we have heard of a farmer, who would diligently call his hogs in the evening, and after counting, admonish them to "go root,") but if they have had any chance of improvement at all, and so failed, they ought to be extirpated, as beasts of prey pernicious to agriculture.

FREDERICK COUNTY (MD.) AGRICULTURAL SOCIETY.—We have received the premium list of the seventh Annual Exhibition and Cattle Show of the excellent Society of Frederick county. This Society has fine grounds, and never fails to make a good Show, agriculturally and otherwise. The Exhibition will commence on the 16th of October and continue four days.

Maryland Agricultural College.

We give below a list of Professors and Professorships of the Agricultural College. The second session opens on the first Wednesday, the fifth day of September.

This institution commends itself especially to the agricultural community of Maryland and the neighboring States, and indeed to agriculturists in all parts of the country. Our friends will find that in patronising it, they are not only putting their sons in the best position probably for their own progress, but that they are fostering an institution which, if generously sustained, is destined to prove of inestimable value to the agriculture of the State and the country. The College is provided with a corps of professors fully competent to the development and successful prosecution of its peculiar system of cultivation—a system presenting advantages embracing all and more than has heretofore been provided at our educational institutions. We ask for it a fair trial. We will send copies of the College circular to those who write for it, or it may be obtained, with any information desired, on application to Dr. John O. Wharton, Register, at the College. The following is a list of Professors, &c.:

J. M. COLBY, A. M.,
President of the Faculty.

PROFESSORS:

MONTGOMERY JOHNS, A. M., M. D.,
Professor of Science of Agriculture, including Chemistry and its application to the Arts, Geology and Mineralogy.

BENJAMIN SHOEMAKER, A. M.,
Professor of the Exact Sciences, including Mathematics, Pure and Mixed, Surveying, Mensuration, Engineering and Construction, Mechanics and Astronomy.

BATTISTA LORINO, LL. D.,
Professor of Ancient and Modern Languages, including Latin, Greek, French, German, Spanish and Italian.

J. M. COLBY, A. M.,
Professor of Moral and Mental Philosophy, History and English Literature.

TOWNEND GLOVER,
Professor of Natural History, Botany, Pomology, &c.

Professor of Physiology, Comparative Anatomy and Veterinary Surgery.

Principal of the Preparatory Department.

BENJAMIN SHOEMAKER, JR.,
Assistant.

Lima beans may be gathered two weeks before the usual time by using lateral instead of upright poles.—*Ex.*

Early Green Food.

The importance of a supply of green feed for stock early in the spring, is very often realised at that time, but generally overlooked at the proper season of preparing for it. Experienced graziers know the value of an early bite, as was indicated in the communication of a Fauquier county correspondent last month. We have very emphatic testimony from others to the same purpose. Cattle, horses, and all stock, thrive faster for an early supply of green food. Youatt says of the horse: "The spring grass is the best physic that can be given to a horse. To a degree which no artificial aperient or diuretic can reach, it carries off every humour that may be lurking about the animal. It fines down the roughness of the legs, and except there be some bony enlargement, restores them to their original form and strength." To horses that cannot conveniently have a run at grass, it is especially important that a supply of green food be duly provided for.

There is no plant which so readily offers a supply of this as Rye, and we have frequently suggested the sowing of a lot either for early pasturage or for cutting. It will afford a good cutting full two weeks before the clover, and so far as we know, the use of it is attended with no ill effects. The editor of the *Farmer's Journal*, at Petersburg, says: "One of the most successful farmers we ever knew, was in the habit of sowing Rye in rich lots, chiefly for spring grazing. If seeded in September, the plant becomes firmly rooted, and affords a great amount of herbage during March and April, until the clover is large enough to graze; and if the stock is then taken off, the yield of grain will be almost as good as if the crop had not been grazed."

A light rich loam is the best soil for Rye. It makes a good growth of straw on ground not fit to be put in wheat. But the richer the better of course, for a good yield. We would sow not less than a bushel of seed, when intended chiefly for grazing or cutting. Sow early in September.

The Tobacco Worm Poison.

Mr. Wm. Shepherd, of Anne Arundel county, to whom tobacco planters are indebted for his continued experiments with the tobacco worm poison, of which we have made frequent mention, informs us now, that he thinks any tobacco planter may protect his own crop by the poison, even if his neighbors neglect it. He says the poison, if made stronger than heretofore recommended, is more effectual—that he would use as much as a quarter of a pound of cobalt to a com-

mon tumbler full of water. The cobalt should be reduced to powder by the druggist when purchased. He thinks that loaf sugar, enough to make the water very sweet, is better than honey—not so liable to sour. The mixture is put into a small bottle, with a quill in the cork, and two or three drops through the quill deposited in the Jamestown blossom, or in the blossom of the tobacco plants. The horn blower will suck the poison till he dies.

A Harford County Ox.

Wm. B. Stephenson, Esq., a well known citizen of Harford county, fattened the past winter an ox ten years old, which he had worked six years, to the large weight of 2335 lbs.—within a fraction of 1400 lbs. *nett*, and sold him for \$11 per cwt.—\$154. Last year he fattened his mate, who *nett* 1300 lbs. The two cost six years ago, \$130, and after doing five years' work, sold for something more than \$300. This ox had a year's run on grass and was fed moderately with grain from November to March. Is it not a very strong argument in favour of substituting oxen for horses in all the heavy work of the farm, that you may buy at three years of age or more, and work them at least four years moderately, with a certain increase in value, and often, as in this case, with a large increase.

A friend of ours has a fancy that on a grain farm his working stock should be composed entirely of Devon oxen and brood mares. The oxen should do the breaking up of his turf and all heavy work; the mares (one-half of which should breed each year) should work the corn and do all light, quick work of the farm, and raise colts.

Delegates appointed by President Merryman to represent the Maryland State Agricultural Society at Exhibition of United States Agricultural Society, at Cincinnati, Ohio, September 12th-20th:

Col. Oden Bowie, Prince George's county.
Dr. Sam'l P. Smith, Alleghany "
Edward Lloyd, Jr., Esq., Talbot "
Dr. W. H. DeCoursey, Queen Anne's "
Col. John H. Sothoron, St. Mary's "
George R. Dennis, Esq., Frederick "
W. H. Oler, Esq., Baltimore city.

At Exhibition of Pennsylvania Agricultural Society, Sept. 25th-28th, at the Wyoming Battle Ground, near Wilkesbarre:

Col. Ramsay McHenry, Harford county.
Major Edward Wilkens, Kent "
L. T. Brien, Esq., Washington "

S. T. C. Brown, Esq., Carroll county,
 Dick'n Gorsuch, Esq., Baltimore "
 Cornelius Staley, Esq., Frederick "
 Edwin Scott, Esq., Baltimore "

At Exhibition of New York State Agricultural Society, at Elmira, October 2d-5th:

J. Howard McHenry, Esq., Baltimore county.
 Col. Charles Carroll, Howard "
 James Mulliken, Esq., Prince George's "
 N. B. Worthington, Esq., Anne Arundel "
 Col. Wm. Richardson, Frederick "
 Alex. M. Morrison, Esq., Baltimore "
 Lloyd Lownds, Esq., Talbot "

At Richmond, 22d-28th October, Union Fair of State and Central Agricultural Societies, of Virginia:

Col. W. D. Bowie, Prince George's county.
 John C. Brune, Esq., Baltimore city.
 Chas. Ridgely, Esq., of Hampton, Balt. Co.
 John W. Jenkins, Esq., Charles county.
 Samuel Sands, Esq., Baltimore city.
 James N. Goldsborough, Esq., Talbot county.

A subscriber in Shenandoah county says: "Can you tell me the best means of keeping sweet potatoes?" We regret that we are not prepared to advise our correspondent from our own experience, and referring to the excellent article in our March and April numbers of 1859, by Mr. W. D. West, near Hampton, Va., we find he does not touch this point. We suggest, however, that it is important to put them, as soon as dry from digging, in a dark and dry cellar, where there will be no risk of frost touching them. Will some of our readers give particular directions on the subject?

Disease in Fruit Trees.

We ask the attention of our pomological friends to the following, from our correspondent in East Tennessee, to whose statement as to the wheat crop of that State we have referred in another place:

"There is a disease at work on our apple, pear and quince trees, which, if it continues, will seriously injure our orchards. It first appears as dead leaves and twigs on the tree, much as if the locusts had been on them, but in many cases it continues until the entire limb is dead. There does not appear to be any insect at work; the bark will turn black, sometimes below green leaves, perhaps several places on the same branch. It continues until, on some young trees, more than half the head is dead, the fruit hanging on, black like the leaves and wood. It does not af-

fect all, but I think two-thirds of mine have it. On some of my young pear trees the leaves begin to turn black round the edges all over the tree. I have heard of pear blight, but have never seen it—is this anything like it, and does it affect the apple and quince? We have a fine country for fruit, and our people were beginning to pay more attention to the cultivation of it. Heretofore nothing has interfered with it, except late frosts in the spring."

SEED WHEAT.—We can furnish a few hundred bushels of very superior Seed Wheat, of the Johnson variety, a very favourite White Wheat. It is this variety of which Mr. M. T. Goldsborough, in the report of his large crop, in our March No., says that "a third of the field in the 'Johnson' yielded almost as much as two-thirds in the 'blue stem,'" when there was no apparent superiority.

Crops and Weather in N. Carolina and Tennessee.

The following letter from the President of the N. Carolina State Society, Dr. Wm. R. Holt, we take the liberty of publishing, though not so designed by him, on account of the statement with reference to the crops in that State. Another from an esteemed correspondent in East Tennessee says: "Our wheat has failed for three crops, and this year worst of all. First the cold of early winter killed much of it—in many cases it was ploughed up. Towards spring it began to grow, and we thought we were going to have a good half crop. The rust appeared on the blades, but did not seem to be doing much damage. A few days before harvest it began to fall down, when there seemed none of it—neither wheat nor straw; many fields that looked fair up to that time were not reaped. I had a seventy-five acre field from which I will not get half the seed I put on last fall."

Below is Dr. Holt's letter as to the crop of N. Carolina, &c.:

LEXINGTON, N. C., August 6, 1860.
 N. B. Worthington, Esq.

DEAR SIR: After my best regards—I enclose you my yearly remittance of one dollar, (a small note current with a traveler South,) a small payment, forsooth, for the pleasure I receive from the monthly salutations of your most valuable journal. My location, you will perceive on the map, is in the midst of the clay lands of middle North Carolina, with a highland growth of oak, hickory, shalbar, ash, gum, and dogwood, paw, &c., peculiarly adapted to the growth of

wheat; we are generally successful in raising good crops and of superior quality, the grain containing much gluten and the white varieties are much prized and sought after, for making a superior quality of family flour. Various causes have operated this season to give this and adjoining counties, not more, generally, than half crops of wheat, and this, as far as can be ascertained from general report, prevails throughout the State; exceptions only exist, in many cases, from superior draining and culture. The oats crop is abundant, and the best for several years. The cotton and corn, much affected and shortened from drought, is now suffering, and can make but the half of full crops. The spring clover has been fine and full, but the month of July has parched up and shortened all grasses very much. The full and abundant crops reported elsewhere cannot be realised here.

I enclose you a premium list of our State Agricultural Society; show it to the Baltimoreans, many of whose manufacturers of agricultural machinery have exhibited at our Fair. We especially would be pleased to see you personally present, and would endeavor to make your visit interesting in many ways.

I have a presentiment that I will receive a visit from you sometime or other. Accept the best regards of

Yours, truly, W. R. HOLT.

A correspondent at Richmond sends us the following:

"I wish you would say to your readers, that calomel, in one ounce doses, will cure a cow of almost any disease. At least let me give my experience: I have two fine, valuable cows; they have had, it seems to me, some of the worst diseases that prevail—black tongue, murrain, dry murrain, &c.—and when I saw they were dying, I mixed one ounce of calomel in dry corn meal, which they would lick up, and it has never failed to cure."

Yours, truly, G. S. P.

Yellow Lupine.

BEAUFORT, S. C., August, 1860.

To the Editor of the American Farmer:

I saw in your last number a request from a subscriber to know where the seed of the Yellow Lupine could be obtained. I write to say, we have an abundance. As soon as the seed matures in September we will forward to your office, and beg you to send to the person who enquires for it. Respectfully,

J. M. P.

We will attend with pleasure to the request of our correspondent.—EDITOR.

[For the American Farmer.]

Observations on the Sympathy and Antipathy amongst Plants.

SYMPATHY.

The vine likes the nearness of cherry trees and elms.

A white vine, planted immediately beside a blue, gets *blue* grapes.

Chestnut trees amongst mulberry trees get twice as large fruit.

Lemon, orange, myrtle, cypress and laurel trees grow and succeed best among one another.

The asparagus increases much better near the *hedeoma pulegioides*, which gives the "penny-royal."

Will you reinforce the smell of the roses? plant some *garlic* or *onion* amongst them.

If you plant some roses and white lilies together in one bed, both get much more sweet-scent.

If you have a valuable flower, which commences to fade by any accident, put next to it a *chamomile*, with its roots in the same pot, and you will see revive the fading flower from day to day.

Will you produce extraordinarily big turnips, beet roots, carrots or red beets? Excavate a few of these, put the seed into the hole, and after a few days sow it.

Will you attain a considerable fertility of the vines? strew some powdered *tartar*, mixed with a little ox-blood, among their roots, and you attain an incredible success.

ANTIPATHY.

The walnut tree is hostile and noxious to every other fruit tree in its next neighborhood.

Enemies against one another are: the olive and the oak tree, the vine and the laurel tree.

Cucumbers, planted among olive trees, perish.

An oak tree, beside a walnut tree, dries up.

Colocyths are noxious to every herb or flower in the same bottom.

Hemlock, beside a vine, dries up.

Rose and orange water loses its sweet scent during the time of blowing of those plants.

The wine becomes unquiet and ferments in the casks while the vine blooms.

DR. RICHTER-SANDOR,

Veterinarian.

The editor does not give the above as having his own assent, but as curiosities which may afford cultivators matters of interesting and amusing experiment.

No tree takes so deep a root as prejudice, none so difficult to eradicate and kill.

Guano versus Bones—Science for the Million.

Written by DR. STEWART, Chemist of Md. State Agricultural Society, for the American Farmer.

The test for timothy seed and soluble phosphate of lime is the same, and it is based on the same general principles. Some never learn, or store their minds with facts, abstract facts, in science; others arrive at these facts by reasoning from general principles, or fundamental laws, from which they naturally grow, as the vine grows from the "cutting," or "slip," extending its roots in one direction, and its branches in the other. The one class may be compared with the *human* or Chinese alphabet, in learning which, we are compelled to learn a letter for every thing. The other may be compared with the *Divine* or Hebrew alphabet, which contains even fewer letters than our own, and yet they represent all things.

In corresponding with the millions of Chinese, we do not expect to use our own alphabet, but we must adopt theirs and endure for a time the ridicule of "young America." Many practical farmers are more familiar with phosphates now, and multitudes who are not farmers, are more interested in their mode of action than were their forefathers with their alphabet. Men who have never had the advantage of "education" are now to be found who can instruct the alumni of most colleges in these matters. When the people invest millions of dollars annually, in *any thing*, they *will* know almost as much about it as some men know about politics. The very details become interesting, and those who cater to the public taste in agricultural matters, make a great mistake, when they suppose that these matters are of subordinate importance and interest.—Every word that the leader of a political party says is published and *republished*, even his private character, "and his visits to his mother" are discussed for four months, or sometimes for four years; but some editors of agricultural journals ridicule all appeals to the common sense of the people in agricultural chemistry; expect them to swallow every thing on good *authority*, and think that they will be satisfied with clippings or books made with scissors.

A month or two has elapsed since I wrote for this journal an article headed "Guano versus Coprolites," and judging from the number of letters that I have received, asking for further information upon this subject, and the assurance "that I was right" by good standard authority, and the ridicule through some editors of agricultural journals, at the extremes, both North and

South; *all* this is *undiluted* encouragement to go ahead.—One lesson, however, I have learned, and that is the fact that a complimentary notice of any guano or manure can be published, but comparisons will not be tolerated. If I had thrown a stone into a nest of hornets I could not have waked up more venom than by that paper. I have obtained the privilege of using the name of a certain guano, and I think I may safely use it as a type of one variety in contrast with bone phosphate of lime. Many years have elapsed since I gave an *impromptu* account of Columbian Guano, to two distinguished merchants, at my office, in Baltimore; their captain, who subsequently visited the Island, confirmed my description of its formation, and I have never had occasion to change in the *least* the opinion I then gave, *and the reason* why it differed so materially from the present White Mexican Guano, (which is the same as bones;) why it was more economical to the farmer than the same weight of pure *bone* phosphate of lime, from any other source, &c. These points I may explain at some future time, but for the present I will confine myself to facts of *practical* importance, that can be verified by any one.

My first proposition is that Columbian and Navassa Guano, although unlike in appearance, are both alike in this, viz: containing phosphate of water, whereas ground bones do not contain any soluble phosphate. Second: The *proportion* of this phosphate of water, or in place of it, alkaline phosphates and porosity, determine the solubility of guano in cold rain water, and indicates the superior value they must always claim over the same weight of pure phosphate of lime, whether from bones or coprolites, apatite or other mineral. Third: Any one who can test timothy seed by fire can detect the difference between insoluble bone phosphate and soluble bone phosphate; for instance, throw some good fresh timothy seed on a hot shovel, and it will not burn, but will fly off—but old dead seed will, under similar circumstances, scorch, char and consume; the proportion of good, in mixed seed, may be approximated to by this test; so also Columbian and Navassa Guano will fly when thrown upon a shovel that is nearly red hot—but powdered bones will not fly under similar circumstances, because they do not contain phosphate of water. Mineralogists distinguish between two varieties of mineral phosphate of lime, by using this simple test; they call the mineral that contains phosphate of water by a name that denotes this peculiar action of fire on it, viz: pyroclaseite, this word being composed of two Greek words, the one means fire—the other to fly or escape from;

whereas the mineral that contains only the bone phosphate of lime will not fly before the blow pipe flame. In my first paper I explained the difference between Guano and Coprolites, and the reason why farmers should prefer Guano. In my second I endeavored to show how the State inspection should show the farmer the relative solubility of phosphatic compounds. In my third paper I have given a popular explanation of my preference for guano over bones, and if I write a fourth paper, it will be devoted to the errors in estimating manures, and some of the errors in using them.

DAVID STEWART, M. D.,
Prof. of Agr. and General Chemistry, &c.,
St. John's College, Annapolis, Md.

AUGUST 15th, 1860.

Asparagus Beds.

To the Editor of the American Farmer :

On my little farm is a pasture lot, which was formerly cultivated as a vegetable garden, but which is now covered with a heavy growth of grass, chiefly blue grass and white clover. In this lot is an old asparagus bed, which still yields a small supply of very tender asparagus, which grows up and shows itself above the blue grass. I wish to restore this bed, and would be glad to know whether it can be done without spading or ploughing. The roots lie very near the surface, and I cannot take off the sod without exposing them. How would it do to cover the old bed this fall with leaves, ashes, manure, &c., to enrich the soil, and with salt next spring to destroy the grass? Can it be restored without digging it up entirely?

IGNORAMUS.

The above should have had attention last month, but was overlooked in our drawer. Our correspondent's own suggestion is a good one, except as to the difficulty of determining how much salt would kill the grass and *not* kill the asparagus. The latter, it is well known, will bear a large dressing of salt and profit by it—but whether as much as would destroy the turf, we are not prepared to say. Again—salt in sufficient quantity will destroy a turf, but make it to grow even more strongly after its first effects have passed off. We suggest to our correspondent that after pursuing his own ideas, he add a covering of straw or other light litter to a depth of six inches. This we think would smother the grass without destroying the asparagus, and be a very material advantage to it.—ED. AM. FAR.

The greatest gluttons are those who feed upon slander.

[For the American Farmer.]

The Cabinet of Mineralogy and Geology in the Md. Ag. College.

Will not all the friends of agricultural science, who read this article, do something towards aiding us in bringing together a suitable collection of geological and mineralogical specimens, *for use*, not for display? Specimens of soils, 1 lb. in weight, taken as directed by Dr. Higgins' Sixth Ag. Report, (Dr. C. Bickell's App., page xiii,) and forwarded in stout cotton bags, *securely and distinctly* labelled with the name of donor, name of farm, county and last crop grown, will be duly acknowledged. Such a collection, *representing the principal soils in the State*, is needed for its practical utility, and can be sent by the various students coming to us in September. Specimens of rock and smaller cabinet minerals are useful, if sent in connection with their neighboring soils, as well as in general mineralogy, even if not accompanied by their soils. Manufacturers of Fertilizers, will you not give us $\frac{1}{2}$ lb. specimens of the crude articles used in your manufactures—also $\frac{1}{2}$ lb. stout paper packages of your *manufactured articles*, with analysis pasted on the packages, and the average quantity per acre you recommend?

Ores of iron, copper and lead, the crude salts used by our manufacturing chemists, will be valuable to us—recent and fossil shells, marine and fresh water organic remains, coal with its associated minerals, specimens of crude gypsum and limestone, used for agricultural purposes, with the name of the locality given, where each is obtained, written distinctly. By aiding us in this matter, you will enable us to labor more efficiently in advancing those students in knowledge who are soon to be, as farmers, merchants, manufacturers, or professional men, the purchasers, vendors, producers or at least judges of the values of those articles you are now engaged in selling or preparing.

Articles left at the office of *American Farmer*, marked "For Cabinet of Agricultural College," will be duly forwarded to us.

MONTGOMERY JOHNS, M. D.,
Prof. Gen. and Ag. Chemistry, Mineralogy
and Geology, in Ag. College of Md.

Transactions of the State Agricultural Society of S. Carolina for 1858, compiled by R. J. Gage, Esq., Secretary. We acknowledge the receipt of the above in a volume of 160 pages. With other interesting matter, it contains the Address of Col. A. P. Calhoun, President, and a Premium Essay on Pomology, by William Summer, Esq.

Meteorological Observations kept at Schellman Hills, Carroll Co., Md., Sykesville P. O.,
JULY, 1860. (Reported for the American Farmer.)

DAY	THERMOMETER.				WIND.			RAIN	REMARKS.
	7 A. M.	2 P. M.	9 P. M.	D'y Mean.	7 A. M.	2 P. M.	9 P. M.		
1	72	70	65	69	N.	N.E.	N.	½	Clear—7 A. M. rain—ended 10 A. M.
2	68	78	72	72½	N.W.	W.	W.	.....	Clear.
3	73	83	75	77	S.E.	W.	W.	.....	Cloudy—clear.
4	74	81	78	77½	W.	S.W.	S.W.	.....	Clear—8 P. M. Aurora Borealis, lasted until 9½
5	75	85	72	77½	W.	W.	N.W.	.....	Clear. [P. M.—showery until 10 A. M.
6	63	64	50	62½	N.E.	N.E.	W.	.....	Cloudy.
7	57	65	65	62	N.W.	N.E.	N.E.	.....	Cloudy.
8	63	74	68	68	N.E.	S.E.	S.	.....	Cloudy.
9	70	80	75	75	W.	S.W.	W.	.....	Clear.
10	74	84	80	78½	W.	S.	S.	.....	Clear.
11	70	78	70	72½	W.	W.	W.	.....	Clear.
12	60	73	58	63½	N.	S.E.	N.E.	½	Clear—5.20 P. M. rain—ended 10 P. M.
13	60	75	63	66	N.W.	N.	W.	.....	Clear.
14	65	75	68	69½	N.	N.	N.	.....	Clear.
15	67	77	70	71½	W.	N.W.	W.	.....	Clear. } From this day, 15th, to the 22d, the mil-
16	70	85	78	77½	W.	W.	W.	.....	Clear. } let double its height, proving it required
17	76	84	73	77½	N.	W.	N.E.	.....	Clear. } above 70°—corn the same.
18	67	85	75	75½	N.	S.E.	S.E.	.....	Clear—6½ P. M. rainbow N. of sun—fine breeze
19	76	80	75	77	W.	W.	S.W.	.....	Clear. [all day.
20	78	88	80	82	N.W.	W.	W.	.....	Clear.
21	77	83	80	80	W.	W.	W.	.....	Cloudy.
22	67	75	68	68½	N.W.	S.E.	E.	.....	Cloudy.
23	73	80	73	75½	S.	W.	S.W.	½	Clear—12½ A. M. heavy gust—ended 7 A. M.
24	63	75	66	68	N.W.	N.W.	W.	.....	Clear. } Temperature too low to mature tomato,
25	64	83	70	72½	W.	W.	E.	.....	Clear. } leaves and stem very acid.
26	70	84	76	76½	E.	W.	S.	.....	Fog—clear.
27	67	80	73	73½	N.W.	W.	N.	½	Clear—1.10 A. M. very heavy gust—ended 7 A. M.
28	63	75	70	69½	N.E.	E.	S.E.	.....	Clear—cloudy. } A mean temperature below 75°
29	70	77	78	75	S.E.	S.	S.	.....	Cloudy. } injurious to corn—in addition
30	77	80	70	75½	W.	N.W.	N.W.	.....	Cloudy—clear. } the W. & N.W. wind has caused
31	70	81	70	73½	N.	W.	N.W.	.....	Clear. } great evaporat'n and chill'd soil.

Monthly Mean, 72.9-10.

2 Inches Water fell.

HARRIET M. BAER.

Reply to a "Victim."

To the Editor of the American Farmer:

In the second article of the anonymous castigator of the Baltimore butchers appearing in your journal for August, he begins by telling us how lawyers arraign criminals for prosecution. Whether he means that the butchers are criminals, and to be dealt with as such, he does not distinctly avow, although such seems to be the tone of his tirade against us. In the paragraph designated "first" he says he understood that a farmer could not sell his own cattle, except at a reduction in price, but had to submit to a tax to a commission man who stands between him and the butcher. He has been wrongly informed, and the truth can be readily ascertained. Farmers can test the matter for themselves. I will buy from the farmer and pay the highest market price, in cash, for first rate cattle. Let farmers come with good cattle (not old oxen) and test practically the truth of what I assert.

In paragraph "second" he charges that there is a combination among the butchers detrimental to the interests of the farmer—this is not only untrue, but absurd—if an association is to exist it must be *incorporated*, as no fifty responsible men can be found who would be so insane as to embark in an open partnership without limit as

to their individual liability. Large bodies of men with large investments of capital all over our country deal through the medium of an act of incorporation. In our case the only result is protection for one member against another. Their relation to the community is not altered one whit by their incorporation, as they always buy for cash. A dealer in cattle might deal with our association for years, through its agents, and never know that he was dealing with an incorporated body. Perhaps the "Victim" would like to break up our manufacturing and railroad incorporations, and our banking institutions, as combinations detrimental to the community. His attack on us will apply with as much force to all incorporated bodies as to us. But how can an association of fifty butchers (out of several hundred) be detrimental to the interest of the farmer or the dealer in cattle? It enables us to buy for cash, at wholesale, large lots of cattle in the market for sale, which otherwise would have to be divided and retailed out to a large number of purchasers, each one picking the lot of its best cattle. When the owner of cattle deals with our association, he knows that he is dealing with a responsible party—and that the cash is paid promptly. When he retails his cattle to a number of purchasers, he is very apt to get caught sometimes by a bad

customer. Not only so, but a large dealer knows that if he brings to this market a large lot of fine cattle, there is an association strong enough to buy out his whole lot, without keeping him here on expense. But the "Victim" is probably wholly ignorant of the fact that each member of the association has the privilege (and exercises it whenever he pleases) of buying on his individual account whatever cattle is for sale in the market; the association therefore is a rival in the market with every individual butcher, its own members included. Beside this there are a large number of butchers who do not belong to Association No. 1, with which the writer is connected. Our association buys none but first rate cattle, and these we are bound to have let the cost be what it may. No statement therefore can be made more directly at variance with the real facts of the case, than the charge that our association is against the interests of the farmer or the dealer in cattle. I allege that our association compels others to give the highest market prices for cattle of superior quality or they could not be supplied. We keep up the very competition which benefits the seller of cattle.

Item "thirdly" in "Victim's" statement relates to loss of weight, I do not intend to discuss further with him the facts of his statement on this point. His statement is a direct impeachment of the integrity of the sworn weigher. This officer is appointed by the State, and according to "Victim's" "facts" he has been guilty of fraud or crime. If the cattle of "Victim" did actually lose in weight as reported by the city weigher, then he has no cause of complaint. If, on the contrary, the weigher swindled him, (as he insinuates) why did he not make the matter the subject of investigation at the time? He seems to know how indictments are drawn, how many counts are put into them, and to have full knowledge of criminal prosecution. If he was aware that he had been swindled by an officer of the State, (over whom the butchers have no control) why did he not fulfill his duty by reporting the case to the proper parties and have him removed from an office which he was unworthy to hold? But the undersigned begs leave to tell "Mr. Victim" that whenever the State weigher is upon his trial, he will be able to establish as fair a character as "Victim" let the test come from what quarter it may. The community will place the sworn weighers account of the weight of "Victim's" cattle along side of his unsworn declaration, and each person will have to judge for himself which is the most reliable. "Victim" had his remedy if defrauded, and he chose to waive any investigation at the proper time, it is there-

fore illiberal and unjust to bring it forward in this irregular way. The weigher referred to is not related in any manner to the undersigned, (as the "Victim" insinuates) he is not and never was a member of our association, which disposes of this part of the article of "Victim." But the undersigned cannot help thinking that a man may be honest even in matters where he has an interest. In the markets north of us cattle are not weighed by a sworn weigher. "Victim" says "I impugn no man's character," when in fact his whole article is an impeachment of the character of the weigher and the agents with whom he dealt in the sale of his cattle. If his whole tirade had not involved the reputation for honesty and fair dealing on the part of our trade, the undersigned certainly would not have noticed an anonymous accuser, but his article was calculated to injure the butchers of Baltimore, and could be viewed by the reader of the American Farmer in no other light.

Item "fourthly" refers to what I said about the laws of trade. I assert that if a farmer or seller of produce finds it to his interest, on reaching the city, to employ an agent he does so; or, if a farmer or producer knows of a more advantageous market than Baltimore, he takes his produce to that market or he is a fool! I also say that our association does not desire or expect any man to sell his cattle to us if he can get a better price elsewhere! These are plain propositions which cannot be perverted by any insinuations from a "Victim." But I assert at the same time, and all past experience proves it, and "Victim" well knows the fact to be so, that a dealer in cattle cannot find any market to surpass the Baltimore market, that a cattle dealer can sell his cattle in this market for cash, and get the highest market prices without the employment of an agent, or the payment of commission to any one; that he can have his cattle fairly weighed by a duly appointed official weigher. And before I close my remarks I will say that I think the reference of "The Victim" to the service of plate, unworthy of notice, except to add that the favor of the "honorable association" will never be turned "against the middle men," or any other men. "Live, and let live," is our motto. We buy cattle for our trade from any body and every body who offers to sell, provided the quality and price will suit. It is unusual to enter into a controversy with an anonymous writer, and I shall not answer a "Victim" further unless he writes under his proper signature.

LEWIS TURNER,

Pres't B. B. H. and Tallow Association.

The Feathered Creation.

THEIR MIGRATION USEFUL TO AGRICULTURE.

The earth surrounded by the atmosphere remains not at rest. The sun, after riding in all his brightness through the vault of heaven, is again hidden from our sight; when he first appears in the horizon all nature is animated by his presence. In autumn, the silent and gradual progress of maturation is completed, and human industry beholds with triumph the rich production of its toil. The unvarying symptoms of approaching winter now warn several of the feathered creation to prepare for their aerial voyage to those happy climates where no deficiency of food or shelter can ever distress them, and at nearly the same time other birds of harder constitutions, who are contented with escaping the iron winters of the Arctic regions, arrive to supply their place.

The migration of birds has been the subject of popular observation since the days of the prophet Jeremiah. This is of great use to us all, as we depend on them for the destruction of insects. Various other means have been tried, but none have succeeded. Migrating birds may be divided into two classes, from the different seasons of the year in which they arrive or depart. To the first class belong those birds which arrive in autumn and depart in spring, called winter birds of passage; the second class will include those that arrive in spring and depart in autumn, termed the summer birds of passage. These being insect-destroying birds, are the most useful to agriculture; we feel the blank which they leave on their departure, although it is, in some measure, supplied by another colony of the feathered race which is of no use to agriculture, which comes to spend with us the dreary months of winter.

The Baltimore Oriole and other birds which live on insects, in the United States, during the summer months, migrates to the West Indies, Mexico, South America and California, and during the months of November, December, January, February and part of March, live on the insects of these countries. The climate of these countries in the summer months being too hot for the birds to breed there, the Creator gave them instinct and power of flight to seek milder climates, wherein to raise their young. Our climate suited them, and they have made this their native place of abode. At the latter end of March they commence to leave those beautiful countries for America, flying at the rate of fifty-seven miles an hour, arriving in May, the time that our insects are awakening from their torpidity, and ready food being at command, they commence

their great work of incubation, raising one brood a year.

How admirably formed are the eyes of the birds of night. To see the insects which fly in the night, birds that feed on night insects may be expected to perform their migration during the same time, it being the season of their activity. Insect food is one of the proximate causes of migration from one country to another. Powerful must be the law of the Creator to the feathered creation, to forsake the wood in which they were hatched and reared to undertake perilous journeys to distant countries, and then return back to the same place they were reared. If insects are thus the favorite food of many of our summer birds of passage, it must frequently happen that their food will be scarce, even after their arrival in this country, owing to variableness of our climate and the dependence of the movements of insects on the temperature of the weather; hence it happens that some birds disappear again, retiring to other districts where insects are to be obtained. It is true that we are unacquainted with the winter retreats of many of our summer birds of passage, particularly of many small birds, but as those arrive and depart under similar circumstances with those whose migrations are ascertained, and as the operations which they perform during their residence with us are also similar, we have a right to conclude that they are subject to the same laws and execute the same movements. Having thus ascertained the winter haunts of our summer birds of passage, where is the summer retreat of our winter visitants? They prosecute their journey to the northward, and those that were bred in the Arctic regions breed there still; they must observe accurately the first laws of life, otherwise the movements to which they gave birth would not be so constant and uniform. These creatures pursuing and destroying insects which are injurious to agriculture, deserve to be protected by every agriculturist in America.

J. JACOB BOWER.

Smut in Wheat.

In the last number of the *Farmer* I noticed an article from a correspondent, discarding the use of blue vitriol and lime as a preventive of smut, and attributing the cause of smut mostly to sowing wheat in the mud. Now, I agree with the writer, that sowing wheat in the mud is to be avoided if possible, and that if the wheat is smutty, and has not been washed with vitriol, brine, or been limed, it will most assuredly help to increase the amount of smut in the crop. I

will give a rule that every farmer that follows it closely, shall not raise one kernel of smut in the next ten years. First, sow clean, sound, healthy seed, without any smut in it; now do not claim that you are following the first part of the rule when you are sowing wheat with only now and then a grain of smut in it. Like produces like; smut produces smut. Every producer of smutty wheat will answer, "you do not believe that smut grows?" I do not believe that the kernels of smutty wheat vegetate like wheat. Take a handful of smutty wheat, remove all the smut balls, and then look at the wheat and see the smut adhering to the sound grain still; smell of it, what a disagreeable odor. These fine particles of smut are spores belonging to the family of *parasitic fungi*, which live by the destruction of vegetable life. A single ball of smut contains about four millions of these spores, and unless these spores are removed from the sound grain by washing, or killed by some poison, as blue vitriol, arsenic, &c., they will produce smut again, varying in amount according to favorable or unfavorable circumstances, such as variations of seasons, sowing in the mud, &c.

The second part of the rule is to apply blue vitriol as follows to the seed: Having measured out the amount of seed to be dressed, dissolve one and a half ounces of blue vitriol for each bushel of wheat by pouring hot water on it, and after dissolved, add cold water so as to have two quarts of water to each bushel; let an assistant shovel over the wheat while the vitriol water is sprinkled on; shovel it over at least three times, sweeping up the scattering each time, so as to wet every grain of the seed. I have strictly followed this rule for the last six years, and have not raised one kernel of smut in the time. My crop of 1859 was 2200 bushels, and I have a part of it on hand yet to spare, and I will give any man 100 bushels of as clean wheat as he ever saw if he will find one kernel of smut grown in it. As this may appear like buncomb to those that raise smutty wheat, I will cite a circumstance to the point. I sold 1000 bushels of the crop of 1857 to Messrs. Smith & Proctor, of Neenah. Mr. Proctor remarked to Prof. Hoyt, of Madison, that I offered to give them the whole of that amount if they would find one grain of smut; yet they failed to find the first grain of smut.

Last year I sowed wheat the same day, and in the same field side by side, with another farmer, who sowed smutty seed and without vitriolizing it, and his wheat produced at least two bushels of smut per acre, while mine was perfectly free from it.

Blue vitriol undoubtedly stands at the head of a long list of preventives of smut. If no seed can be found in reach that is perfectly clear of smut, take that that comes nearest to it, and the first year by the use of vitriol will render it nearly or quite perfect; and do not fail to repeat the use of the vitriol each year, though no smut be found.

I am not prepared to say whether the manure made from the straw and chaff of very smutty wheat would injure the next crop of wheat if coming in contact with the seed. Neither have I had any experience to prove that wheat heated in the mow will not produce smut sometimes; none such should ever be sown. Mould and mildew are a species of fungus; but they are so different from the spores of smut that it does not seem probable that one can produce the other.—
Wisconsin Farmer.

Keeping Pears.

The pear is a peculiar fruit in one respect, which should always be kept in mind, viz: that most varieties are much finer in flavor, if picked from the tree and ripened in the house, than if allowed to become fully matured on the tree. There are a few exceptions to this rule, but they are very few. And, on the other hand, we know a great many varieties which are only second or third rate, when ripened on the tree, but possess the highest and richest flavor, if gathered at the proper time, and allowed to mature in the house. This proper season is easily known, first, by the ripening of a few full grown, but worm eaten specimens, which fall soonest from the tree; and, secondly, by the change of color, and the readiness of the stalk to part from its branch, on gently raising the fruit. The fruit should then be gathered—or so much of the crop as appears sufficiently matured—and spread out on shelves in the fruit room, or upon the floor of the garret. Here it will gradually assume its full color, and become deliciously melting and luscious. Many sorts, which, ripened in the sun and open air, are rather dry, when ripened within doors, are most abundantly melting and juicy. They will also last for a considerably longer period, if ripened in this way—maturing gradually as wanted for use—and being thus beyond the risk of loss or injury by violent storms or high winds.

Winter dessert pears should be allowed to hang on the tree as long as possible, until the nights become frosty. They should then be wrapped separately in paper, packed in kegs, barrels, or small boxes, and placed in a cool, dry room, free from frost. Some varieties, as the D'Arenberg, will ripen finely with no other care than placing

them in barrels in the cellar, like apples. But most kinds of the finer winter dessert pears should be brought into a warm apartment for a couple of weeks before their usual season of maturity. They should be kept covered, to prevent shriveling. Many sorts that are comparatively tough, if ripened in a cold apartment, become very melting, buttery and juicy, when allowed to mature in a room kept at the temperature of 60 or 70 degrees.—*Downing.*

SUNDAY READING.

I know but one way of fortifying my soul against gloomy presages and terrors of mind, and that is, by securing to myself the friendship and protection of that Being who disposes of events, and governs futurity. He sees at one view the whole thread of my existence, not only that part of it which I have already passed through, but that which runs forward into the depths of eternity. When I lay myself down to sleep, I recommend myself to His care; when I awake, I give myself up to His direction. Though I know neither the time nor the manner of the death I am to die, I am not at all solicitous about it, because I am sure that he knows them both, and that He will not fail to comfort and support me under them.

As to be perfectly just is the attribute of the Divine nature; to be so to the utmost of our abilities is the glory of man.

Oh man! what have you to do with earth, who pretend to be of heavenly abstraction, when you say, "Our Father, which art in heaven?"

If thou be careful of the things of God, He will be careful of thee and thine.

It behooves us always to bear in mind, that while *actions* are always to be judged by the immutable standard of right and wrong, the judgments which we pass upon men, must be qualified by the consideration of age, country, situation, and other accidental circumstances, and it will then be found that he who is *most charitable* in his judgments, is generally the *least unjust*.

As it is hard for one who is good himself, to judge another to be naught, so again, it is hard for one who is naught himself, to judge another to be good.

Punishment is the recoil of crime; and the strength of the backward stroke proportions itself to the strength of the original blow.

There are two extraordinary virtues to be

learnt from human imperfections. The imperfections of others may teach us patience; the imperfections of ourselves may teach us humility.

Whenever I spy a fault in another, I am determined to seek for two in myself, and they will not be hard to find.

For as the good fruit is not the cause that the tree is good, but the tree must first be good before it can bear good fruit; so the good deeds of men are not the cause that maketh men good; but he is first made good by the grace and spirit of God, that effectually worketh in him; and afterwards he bringeth forth good fruits. And then as the good fruit doth argue the goodness of the tree, so doeth the good deed of the man argue, and certainly prove, the goodness of him that doeth it, according to the saying, *ye shall know them by their fruits.*

It would be an ease to Gospel-sinners in hell, if they could raze the remembrance of the Gospel out of their memories, and forget that they ever knew such truths.

It is an observation as true as common, that no man was ever extremely wicked on a sudden. A hardy sinner must be the work of time, a creature of industry and toil, of conflict and repulses.

The right and true Christian faith is, not only to believe that the Holy Scripture and all the articles of our faith is true, but also to have a sure trust and confidence in God's merciful promises, to be saved from everlasting damnation by Christ; whereof doth follow a *loving heart to keep His commandments.*

Unless our faith purifies our hearts, and works by love; unless our sorrow for sin works in us repentance, or a change of mind; unless our prayers raise in us divine and heavenly affections, that is, unless we so practice the duties of the *religion of the means*, as thereby to acquire the virtues of the *religion of the end*, it will be all as insignificant to our title to heaven as the most indifferent actions in the world.

Meekness is a virtue by which a man may know a Christian better than by his name, says Chrysostom; and Tertullian telleth us, that anciently, among the heathen, professors of Christianity were called, not Christiani, but *Chrestiani*, a Greek word signifying sweetness and benignity of disposition.

The more we are subjects, the more we shall reign as kings; and the faster we run, the easier is our burden; and Christ's yoke is, like feathers of a bird, not loads, but helps to motion; without them the body falls.

Wholesale Produce Market.

Prepared for the American Farmer by ELLIOTT & HEWES, Produce and Commission Merchants, 59 Exchange Place.

BALTIMORE, August 22, 1880.

BUTTER.—Ohio, in brls. and kegs, 10 to 11; Virginia and Pennsylvania, in kegs, 11 to 12; Glades, 12 to 14; Roll, 12 to 14.
BEEFWAX.—37 cts.
CHEESE.—Eastern 11, Western 10.
DRIED FRUIT.—Apples \$1.40.
EGGS.—In barrels, 12 cents per dozen.
FEATHERS.—47 to 48 cents for good Southern.
LARD.—Brils. 13½, kegs 14, jars and other country packages, 13½ to 14.
TALLOW.—10½ cents.
WOOL.—Unwashed 23, tub washed 33, pulled 20, fleece 40 cents.

Baltimore Markets, Aug. 22.

COTTON.—The demand is confined to wants of manufacturers. Holders are firm, sales are being made at our quotations.

Grades.	Upland.	Gulf.	Western.
Inferior.....	5 a 6	5 a 6	5 a 6
Ordinary.....	7 a 8	7 a 8	7 a 8
Good do.....	9 a 9½	9 a 9½	9 a 9½
Low Middling.	10½ a 10½	10½ a 10½	10½ a 10½
Middling.....	11 a 11½	11½ a 11½	11 a 11½
Strict Middling	11½ a 11½	11½ a 11½	11½ a 11½
Good Middling.	11½ a 12	12½ a 12½	11½ a 12
Middling Fair.	12½ a 12½	12½ a 13	12½ a 12½

FISH.—We quote prices as follows: Mackerel, \$7 to \$7.25 for medium; \$9 to \$9.25 for large No. 3. Alewives, \$4.50 to \$5. Southern Herrings, \$5 to \$5.25, for short and full brands; Eastern Herrings, \$2.25 to \$2.50. Shad, none here.

FLOUR.—We quote Howard street Super, \$5.50; Extra, \$6.25. City Mills Super, \$5.50; Extra, \$6.25. Family Flour, \$6.50 to \$7.00 for the different brands; very choice brands, \$8.

Rye Flour and Corn Meal.—We quote Rye Flour at \$4. Corn Meal at \$3.62½ per bbl.

GRAIN.—Red Wheat, \$1.22 to \$1.28 for good to prime. White, \$1.20 to \$1.30 for ordinary to fair; \$1.35 to \$1.50 for good to prime, and \$1.57 to \$1.70 for fancy lots.

Corn.—We quote white at 75 to 78; yellow 68 to 72 cts.

Oats.—Maryland and Virginia, 30 to 33; Pennsylvania, 38 to 38 cents.

Rye.—Maryland and Virginia, 71; Pennsylvania, 78 cents.

Mill Feed.—Brown stuff, 15 to 17; middlings, 27 to 30 cents per bushel.

PEAS AND BEANS.—None in market.

PROVISIONS.—**Bacon.**—Shoulders, at 10½, and Sides at 12½ cents per lb.

Bulk Meat.—Shoulders 9½; Sides 11½ cents per lb.

Pork.—Mess, \$19.75; Prime, \$15.00. Rump, \$14.50.

SEEDS.—Clover seed, \$5.50. Timothy, \$3.25. Flaxseed, \$1.35 to \$1.45 per bus.

SALT.—Turks Island, (except in cargo lots,) 25 cents per bushel.

ASHES.—Pot, \$5.12½; Pearl, \$5.50 per 100 lbs.

TOBACCO.—There is a fair demand for Maryland Tobacco, and good descriptions are taken within the range of our quotations. We still quote frosted Maryland at \$2; ground leaf at \$3 to \$7; common at \$2.50 to \$3.50; middling, \$4 to \$4.50; good middling, \$5 to \$5.50; good leaf, \$6 to \$6.50; and fine at \$7 to \$12. Ohio Tobacco—inferior to good common at \$3 to \$4; red and spangled at \$5 to \$6.50; good and fine red spangled at \$7 to \$8, and good and fine yellow at \$9 to \$12. Kentucky Tobacco. We continue quotations, viz: common lugs at \$4.25 to \$4.75; good do. at \$5.25 to \$5.50; inferior leaf at \$5.75 to \$6.25; good do. at \$6.50 to \$7.50; fine at \$7.50 to \$9; choice at \$10 to \$12; and rich heavy Kentucky at \$7 to \$12.50.

GUANO AND OTHER FERTILIZERS.—Prices continue without change. We quote Peruvian at \$61 to \$62 per long ton, according to quantity—the latter being for a single ton and upwards. For less than a ton, at the rate of \$56 per ton of 2000 lbs.; California or Elide Guano, \$40 per long ton; Manipulated, \$47; Super-Phosphate, \$45; White Mexican \$28; A. A., \$20 to \$22; American Guano \$40 per ton of 2240 lbs.; Sombrero, \$30 per long ton; Jobaboe

Guano, \$52. Navassa Guano, finely ground, \$26 per ton. Ground Bones, \$27 per 2000 lbs. (packages extra.) Poudrette \$10 per ton in bulk. Plaister, \$1.25 per brl. Hides—Country slaughtered, 9 to 9½; dry do. 14 to 15 cents.

HOPS.—14 to 15 cents per lb. for new crop.

HAY AND STRAW.—Hay is scarce, new baled, \$15 to \$17 per ton. Straw, \$15 for rye, \$10 to \$12 per ton for oat and wheat.

CATTLE MARKET, August 16.—The Cattle Market was not particularly active to-day, but prices were a shade better than on last market day. The offerings of Beves at the scales were about 900 head, against 1,100 head last week, 800 of which were sold to Baltimore butchers at prices ranging from \$2.75 to \$4, averaging \$3.50 per 100 lbs. gross, and the remaining 100 head were left over unsold.

Hogs.—We continue to quote hogs firm at \$8 to \$8.50 per 100 lbs. net. They are in good demand at these figures.

SHEEP.—Sheep have advanced, and we now quote them at \$2.25 to \$3.25 per head.

NEW ADVERTISEMENTS.

Angell & Co., A. H.—American Guano.
 Ault & Son, S.—Cabbage Seeds.
 Bartholow, J. P.—Agricultural Implements, &c.
 Brown, S. T. C.—Devon Cattle.
 Buist & Son, R.—Garden Seeds.
 Bradenbaugh & Pope—New Force Pump.
 Cleaveland, Edwin A.—Cranberry Circular.
 Darlington & Co., J. L.—Peach and Apple Trees.
 Ellwanger & Barry—Trees.
 Farinhart, Mrs. A. M.—York River Land.
 Feast & Sons, Sam'l.—Fillmore Strawberry, &c.
 Elliott & Co., A.—Sombrero Guano.
 Goldsborough, Martin—Stock.
 Giddings, Major L.—Severn Side Farm.
 Griscom, David J.—Fruit Trees, &c.
 Giddings, L.—Grape Vines, &c.
 Higgins, Dr. James—Per-Manipulated Guano.
 Hoyt & Sons, Stephen—Peach and Cherry Trees.
 Harthill & Co., Alex.—New Books.
 Kennedy, Dr. A. L.—Polytechnic College.
 Malcolm & Co., P.—Elide Island (California) Guano.
 Morris, Paschal—Agriculture Warehouse.
 Maryland Agricultural College—Fall Session.
 Md. State Agr'l Soc.—Quarterly Meeting Ex. Com.
 Office—Chester Pigs.
 Robey, H. R.—Southern Fruits.
 Richter, Dr. Sander—Important Discovery.
 Sinclair & Co., R. Jr.—Wheat Drill and Fanning Mills.
 Sinclair & Co., R. Jr.—Straw Cutter and Masticator.
 Smith & Hanchett—Syracuse Nurseries.
 Tasker & Clark—Phosphatic Fertilizer.
 Fredwell & Fell—Share's Harrow.
 Turner, J. J. & F.—Excelsior Guano.
 Van Dozen, Abram—Farm, near Frederickburg.
 Whitman, E. & Co.—Hickock's Cider Mill, Drills.

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AMERICAN GUANO,

Price \$40 per Ton of 2240 lbs., or 35 Per Cent. less than Peruvian.

A. H. ANGELL & CO.,

55

West Pratt-St.,

BALTIMORE,

MARYLAND.



Agents for the

American
Guano Co.

OF NEW YORK.

OFFER FOR SALE THIS

SUPERIOR FERTILIZER!

OF DIRECT IMPORTATION

FROM JARVIS AND BAKER ISLANDS,

IN THE PACIFIC OCEAN.

A. H. A. & Co. would call the attention of farmers, and all other purchasers, to the fact that they are the *only authorized* agents of the AMERICAN GUANO COMPANY for the State of Maryland—and all Guano received from them will be WARRANTED PURE AND UNADULTERATED, and every package will bear upon it their name in full, with the trade-mark of the Company, same as the above cut.

A perusal of the following Certificates, giving the *practical* results of the use of this Guano, will show to the farmer its true value, as proved by actual trial upon various crops in this State:

DAVIDSONVILLE, Anne Arundel Co., Md., }
July 23, 1860. }

Messrs. A. H. Angell & Co.:

GENTLEMEN: Your letter of enquiry relative to the American Guano, came duly to hand. Absence from home prevented an earlier reply. I used your Guano on wheat, and at the time I ordered it, intended to give it a full and fair trial beside of Reese's Manipulated. Inclement weather in part disappointed me, preventing the sowing of the wheat upon which it was used till the 23d of October, while that upon which Reese's was used was put in before the 15th. Notwithstanding this disadvantage, the American Guano made it mark, and the wheat that escaped the fly and frost had a better head and finer grain than that produced by the Manipulated, and I believe, had it been put in as early as the 15th of October, the yield would have been greater.

I do not, however, consider the grain producing qualities of the American Guano its greatest recommendation. In its adaptation to Grass lies its highest value; the clover on the land upon which it was used is far superior to any portion of the field, standing the drought much better and growing more kindly.

Yours respectfully,

EDWIN A. DITTY.

TOBACCOSTICK, Dorchester Co., Md., }
July 11th, 1860. }

DEAR SIRS: I used your American Guano on wheat. It answered very well—I shall use more this fall—I think it very good. Yours, &c. P. & J. E. HARRINGTON.

FRUITLAND, near Annapolis, July 12th, 1860.

Messrs. A. H. Angell & Co.:

GENTLEMEN: Yours of the 9th was received. As to the result of the Guano on my wheat, I can say nothing definite, because of its destruction by the fly and other causes. Early in the spring it looked better than my neighbor's and gave promise of a first rate crop. I think under ordinary circumstances the Guano would have paid well. It was used at the rate of 250 lbs. to the acre—the land was poor. I also tried your Guano on corn this spring (the last time this land was in corn it was hardly worth gathering)—I used the Guano in three ways: first, ploughed in about 300 lbs. to the acre; next, put half a small handful in each hill; next, mixed the Guano with three times its bulk of marsh mud, and applied a handful to the hill. One of these methods is as good as the other, so far as I see. Without one of them I don't think I will be, till my land gets rich. The corn where this was applied has a fine color and is eighteen inches or two feet higher than where no manure was put.

Respectfully yours,

EDWARD A. WELCH.

WOODLAWN, Harford Co., August 1st, 1860.

Messrs. A. H. Angell & Co.:

GENTLEMEN: We have tried your American Guano both on wheat and corn, in comparison with the California Guano, applied at the same rates, and see no difference between them—both seem to act alike.

A. T. LEVERING & BROTHER.

KETTLEWELL'S MANIPULATED GUANO,

Being equal proportions of the best Peruvian and Phosphatic Guano, from the Islands of
Chincha and Nevassa, combined by costly machinery.

NO. 1 AND NO. 2.

NO. 1 CONTAINING 8 PER CENT. OF AMMONIA AND 45 TO 50 PER CENT. PHOSPHATE OF LIME.

NO. 2 CONTAINING 5 PER CENT. OF AMMONIA AND 55 TO 60 PER CENT. PHOSPHATE OF LIME.

A remark was made some few years ago by an intelligent agriculturist, traveling through certain portions of Maryland and Virginia, that one of three things must necessarily occur to the population—either reformation, emigration, or starvation. The impression was suggested by the impoverished condition of the land, and the hopeless prospect of a renovation. Could the same party now witness the same country, with its clover, corn, wheat and grass fields, its fertility, prosperity and the luxuriant growth of every crop, the unmistakable evidences of rapidly increasing wealth, order, enterprise and universal improvement, he would be peculiarly capable of forming a slight conception of the service that concentrated fertilizers had rendered the country, and the use of which alone has enabled the Planter and Farmer to keep pace with the general progress of every branch of industry and business enterprise. Amidst the general distrust and criticisms upon fertilizers, this record, as a great truth, merits and should receive a just consideration, and will particularly strike those who are not within reach of lime or ashes, and who are unable to collect, in adequate quantities, domestic manures. Look upon the past and the present, in the sections of country to which I have alluded, and reliable fertilizers, with all their exceptions, require no other vindication, whilst farmers who frequently find the most fault, would often be the most reluctant to yield them up. In the country of which I spoke, the only reform has been fertilization, and it has commanded emigration to, instead of from its borders.

It is but just to record to the introduction of Peruvian Guano the starting impulse to this new advent in agricultural progress. Experience and use of this great stimulator soon developed that its costliness in price was not its only expensive feature. It drew heavily upon the soil, in consequence of its deficiency in Phosphate of Lime, and excess of Ammonia—producing in rainy seasons large crops, but impoverishing, rather than improving the soil, and, with rare exceptions, rendering no service to a second crop. The farmer had to depend entirely upon his first crop for his chances of a remuneration. In great droughts this heavy expenditure was an entire loss. The vital deficiency of Phosphate of Lime

caused very great apprehension, and the extensive use of Peruvian Guano alone, demonstrated that it was not groundless. This rapid stimulator depreciated the quality of land to such an extent, where it was continuously used, that various substitutes were offered to the public, but never with sufficient success to produce an active and formidable rivalry until my origination of "Kettlewell's Manipulated Guano," the first that ever was manufactured, and which from that day to this has had a demand only subordinate to the Peruvian. Its perfect combination by extensive and costly machinery, in equal parts, of the best Peruvian and Phosphatic Guano, supply in rational proportions the deficiency of each. The Phosphatic Guano contains no ammonia; the Peruvian double the quantity required by a wheat crop of thirty bushels to the acre, but only half enough of bone dust or Phosphate of Lime to yield crop and durably improve the land. The union of the two guanoes in the perfect manner it is done by me, is in exact conformity with the teachings of Liebig and other distinguished chemists, and five years' increasing use has demonstrated its truth and wisdom.

Kettlewell's Manipulated Guano has triumphed over every assault! vanquished every prejudice! and what has it not had to contend against? If a long drought impaired the growth of crop, the Manipulated was denounced. If the ravages of the fly destroyed the just hopes of the farmer, the Manipulated was held responsible! If the joint worm made certain destruction, apprehensions and doubts were at once expressed in regard to its value. If negligent application, and bad farming occurred, the Manipulated Guano was the "destroying angel." As an experiment contending against Peruvian Guano, every misfortune, neglect, dispensation of Providence, or fault of man, fell upon the head of the "Manipulated Guano. But the most remarkable of all my extensive experience, is the fact, personally known to myself, that where my Guano has been used alongside of the Peruvian, upon the same soil, in the same field, and where the crop has suffered alike from these dispensations, excuses and apologies were made for the Peruvian, whilst doubts were freely expressed in regard to the value of the Manipulated. Why is this? Is it

policy in the farmer? Is it to his interest? Why this indisposition to go into detail? Why are not more experiments carefully made by weight and measure? Why take the appearance of the crop of straw for the actual result of crop, a thing so often done? I can only account for it in the distrust by some parties of not having equal and exact justice done them in the manipulation of the two guanoes—in apprehension of fraud, and want of strict integrity on the part of the manipulator. How can this confidence be implicitly commanded? Is personal character nothing? Is Peruvian Guano never depreciated? Are men likely to live for half a century with the unquestioned confidence of their fellow-citizens, and *bankrupt it all, for no earthly motive?* With no taint upon their reputation, to commit fraud, where honesty is the best policy? To cheat where cheating would be ruin, is a weakness which only an insane man could be suspected of, and which would bring so rapid and just a retribution. On the contrary, in no form can Guano be bought with so great a certainty of its purity as in the Manipulated, because with every quality to select from, with information and opportunities which the farmer has not—with experience and analytical tests to guide me, I protect my own interest, *when I do the planter's.* To make this protection a system, I can supply the farmer, and I am prepared to supply him with every description of Phosphatic Guano. He can examine every quality, have a written guaranty, and at every price—from the highest to the lowest—with explanations that cannot help but be of service to him. I trust that every planter who reads will bear this in mind. My Factory now contains several thousand tons of Phosphatic Guano of nearly every description.

These distrusts, however, in Kettlewell's Guano have been corrected by time, use and experience. The pioneer in this business, my long experience properly inspires confidence, and the fidelity and consistency with which my Guano has maintained its standard from first to last through so many years, satisfactorily accounts for a result so just and natural.

Are there not systems of farming by which our principal fall crop, Wheat, might be greatly protected from the ravage of that most destructive insect, the fly? Could we not, by a more extensive use of clover seed, help our Corn crop through the terrible droughts with which, in many sections of country, it has had to contend the past few years?

Who has not observed—that has observed at all—the preference the fly has for wheat sown upon a wheat stubble? In my own experience I have grown upon the same land and field a heavy crop of wheat upon a clover sod, whilst the residue of the field, sown upon a wheat stubble, has been almost destroyed by the fly? Upon two occasions in my life, I have done this purely as an experiment, and both times with precisely the same results.

I may again ask, in excessive droughts how perceptible is the difference where corn has been planted upon a turned sod, and where there is none? Indeed, in sowing wheat upon an oats stubble, I have found the greatest advantage from sowing a quart or two of clover seed with the oats. Before ploughing time for wheat, the

young clover, in good seasons, makes a fair show, and right or wrong, I have adopted the opinion of a venerable Pennsylvania farmer, that it affords food for the insects, and thereby protects the young wheat. These suggestions can leave no doubt in regard to my opinion of the value of clover or the *manure which will produce it in its most luxuriant growth.*

I have been frequently asked by farmers this question: "Where, in my own experience, I have found the most marked and distinct difference in the value of the Peruvian Guano and my own Manipulated?" To which I could truthfully answer as I do now:

"That in my experiments I applied equal quantities of the two guanoes upon the same land, side by side, and sowed the same quantity of wheat. The product in measurement was about equal, but the Manipulated weighed decidedly the heaviest, and commanded a higher price. In all cases the straw was far greater where the Peruvian had been applied. Following the experiment up, I tried both corn and oats upon the same land without any manure whatever, and the difference in the second crop, without help in favor of the Manipulated, was incredible, and where (as is my custom) I sowed clover seed, a mere statement of the most remarkable contrast in the crop of clover might excite suspicion of fairness, yet I can give the names and postal directions of hundreds of the best farmers in Maryland and Virginia, who will confirm all I have stated in its widest latitude.

These truths are becoming well established—confidence is rapidly yielding to distrust, and those whose duty it is to carefully watch and enlighten public opinion, are daily speaking stronger and stronger in favor of the Manipulated. The leading agricultural journals are taking decided stands to secure its general use. "The American Farmer," always on the alert to keep the farmer correctly informed, took an early period to speak in the most favorable terms of its use; others have followed, whilst the editor of the Richmond "Southern Planter," in the August number, has spoken without reserve in its favor, in an editorial marked with frankness and ability, which every planter or farmer should read with care and attention. The editor wisely says, among other things, as follows:

[From the Southern Planter.]

"We have been a close observer of the effects of Guano for ten years past, and have several times had to pay rather dearly for our whistle by the use of it, without any benefit accruing to us. We have come to the conclusion that no farmer should run the risk of incurring a dead loss of several dollars to the acre for manures, if from any cause they should prove inoperative and the crop should fail. It is certainly wiser in applying fertilizers, to use such as will enable him to lay up a store for the future, on which his land may draw, if the growing crop should fail of deriving present advantages from its application. Therefore he should be accumulating *Phosphates* in his soil, if possible, the benefits of which

will be apparent sooner or later. As regards the wheat crop, this is especially liable to disasters from insect enemies, unpropitious seasons, and accidents from fire and flood. As a class, unfortunately we farmers are not so well endowed with this world's goods as to be able to pay five or six dollars an acre for the pleasure of *reaping a big crop of straw*—and yet there are many who have had but little better success from using Peruvian Guano on wheat. For ourselves we can assert truly that we never succeeded but once in a good crop of grain when we used it alone—nor did we ever fail to make a big crop of straw."

The value of the various Phosphatic Guanoes has been a subject of much disputation, and is indeed a question of vital importance to the value of Manipulated Guano. The Phosphatic Guano varies in quality almost as much as any ore found in the earth, and, as a necessity, the value of the Manipulated Guano greatly turns upon the richness of the Phosphatic. At an early period of my business, feeling that it would in all probability be a permanent one, I employed the services of the late Prof. C. A. Bickell to analyze with great care all the Phosphatic Guanoes. It was for my own private use, and the greatest circumspection was observed by him. I selected Professor Bickell because, with my own, he had, as he deserved, the unlimited confidence of every dealer and importer in this great guano market of the Union, not only as a man of great scientific attainments, but with an integrity and capacity which made his death a public loss. He unhesitatingly advised me to use the Nevada Guano, which I have done from that day to this. I owe his memory a profound debt of obligation, as the success of my Guano and progressing convictions demonstrate that he was right. His views expressed to me, were so exactly in conformity with that of an equal authority, Doctor Stewart, Professor of Chemistry in St. John's College, Annapolis, and Chemist of the State Agricultural Society of Maryland, that I prefer to use, by extracts, the professor's own words. Sensibly alive to the increasing use of Phosphatic Guanoes, he has voluntarily written several valuable papers, which ought to be read by every farmer and planter; they can be found in the columns of the *American Farmer* for July and August of this year. It will be seen in Professor Stewart's note, that he pronounces Sombrero Guano a Coprolite, and to those who do not know, he clearly explains what that is.

[From the American Farmer for July.]

Guano versus Coprolites.

LABORATORY OF ST. JOHN'S COLLEGE, }
Annapolis, 14th May, 1860. }

Coprolites are fossil, or petrified excrements of turtles and other animals.

Coprolites differ in solubility from guano, although composed of the same elements in the same proportions—being more dense, or specifically heavier, and having their particles so closely

united to each other as to exclude solvents except from their outer surface. The finest powder that can be produced by mechanical trituration or grinding will not bring coprolites to that atomic state of division which characterizes the phosphates in guano and bones that have not been petrified or converted into stone. * * * *

There are four phosphatic compounds inspected and sold as guano in the Baltimore market. 1st. The guano now obtained from the Pacific coast, resembling the Mexican. 2d. Guano that has been *concentrated* by exposure to the weather, still however retaining its porosity and solubility—such, for instance, as the Nevada guano. * *

In England, coprolites are ground and mingled with oil of vitriol, in order to increase their solubility; but even under these circumstances they are not as valuable as guano or bones similarly treated, for the reason above stated, viz: because each particle is *compact* and solid, while guano is full of pores, however small the particles. It must be manifest, then, that manipulated guano made with coprolites is not as valuable to the farmer as that made with guano.

I wish to call the attention of the agricultural community to this fact, and caution them against purchasing coprolites, that are now ground and sold as guano or "manipulated guano." Any novice or tyro in chemistry can make an estimate of the comparative solubility of the articles referred to. For instance, take $\frac{1}{4}$ oz. of the *coarse* Nevada guano before it is ground, and compare it with the same weight of the *fine* powder that is sold as guano and vaunted as the best in the market; throw each sample on a small filter *suspended* in a wine-glass, that has been about half filled with nitric acid, diluted with about nine parts of water. After two or three hours it will be found that the Nevada guano is more soluble in the proportion of 5 to 21, viz: the Nevada guano yields 21 parts of phosphate of lime to cold dilute acid, while the coprolites yield only 5 parts. A boiling temperature, or prolonged digestion or even infusion, gives a *different result*, and this is the reason why more than a dozen of the best chemists in the United States have endorsed the certificates obtained from Europe call coprolites guano, and recommending these petrifications as comparable with guano *in proportion* to the phosphate of lime they contain. I made the same mistake once in comparing the phosphorite mineral of New York with bones; or rather, I endorsed the opinions of some of these very gentlemen. * * * * *

When Columbian guano was unsalable, and the agency was declined by one of the best mer-

chants in Baltimore, because it would not sell at \$17 per ton, when other chemists were hesitating, I pronounced it by far the richest and most valuable source of phosphates thus far discovered. Now that it is exhausted, I make the same remark with regard to Nevassa guano, having obtained my samples direct from State Inspector, and under his official seal. I do not accuse any one of fraud; but there are several *valuable* manures now sold in Baltimore at \$40 per ton, that are not, on an average, worth more than half the money, except according to the notion that a thing "is worth what it will bring." Farmers seem to forget what "poor Richard" said about "paying too dear for the whistle." * * * * *

I have not attacked, nor will I attack any one, but merely express my own opinions; I do not seek controversy, nor will I engage in it, as the statements I have made do not rest on authority, but the proof of their accuracy is in the hands of every one who is willing to think for himself.

"Be not like dumb, driven cattle,
Be a hero in the strife!"

DAVID STEWART, M. D.,
Chemist of Md. State Agr. Society.

Valuation and Inspection of Guano and other Fertilizers.

Written by DR. STEWART, Chemist of Md. State Agricultural Society, for the American Farmer.

As coprolites and bones are *not* guano, they can be adulterated ad libitum—but if the bones of turtles or a petrification "*as hard as marble*"* is ground and called guano, it must be inspected according to law and stamped or stencilled by State authority, and delivered to the farmer as guano. The name, guano, sells it, and it cannot be sold under the name of guano unless it is inspected, consequently all this extra expense is put upon the poor farmer, upon the same principle that "American brandy is put up in French barrels, exported and then imported again, in order to obtain the Custom House voucher for its French

* Since writing the above paper, I have received two letters from Baltimore, with regard to the article in the last *American Farmer*, headed "Guano vs. Coprolites." The request is made that I should distinctly state the names of those articles now sold in Baltimore under the name of guano that are not as soluble as guano and that I pronounce to be coprolites.

I will give a test by which any one can, without chemical reagent or manipulation, see for himself. With the aid of a good pocket lens, or, still better, a microscope, the Sombrero guano will be found compact and dense as one of the secondary marbles, whereas Nevassa guano will appear porous and evidently composed of "organic matter."

origin." This is "paying dear for the whistle;" but in this case the expense falls on the consumer, whereas, in the case of guano, it rests on the farmer exclusively.

If, as I suppose, the dealer is an honest man, who adopts the name guano because sustained by the best authority, as in the case referred to, (coprolites,) then it is just the case I want "to show up," as it exhibits facts without attributing bad motives—especially if I proved that the article is neither guano nor as good as guano! !

Phosphoric acid, as it naturally exists in guano, may be soluble in pure water—or it may be comparatively insoluble, except the water be acidulated, as, for instance, that of bones and some varieties of phosphatic guano—or it may be difficult of solution even in acidulated water, except by the aid of heat or prolonged infusion, as, for instance, that of coprolites or petrified excrements of animals, that are ground and sold under the name of guano.

The past year has been a most calamitous one in sections of Maryland and Virginia, as well as throughout the South generally, to planters and farmers. It has tried manures literally in a furnace of fire, the drought being almost unexampled. Here agriculturists will find a demonstration of the higher value of the Manipulated. If, in withholding the dew and the rain, Providence has shortened or destroyed the crops, where the Manipulated Guano has been applied, the farmer has not lost his investment in my fertilizer. If he will only make the experiment under a more favorable season, upon the same land, with no further application of manure—at no additional cost—he will find it fulfil the entire purpose of producing a satisfactory crop. The larger the quantity applied the less will be his loss.

My Manipulated Guano is thoroughly prepared, fine as powder, and of the best materials that my long and practical experience, with every facility of selection, enables me to do so with a certainty that should merit and receive confidence.

I have adopted the mode of putting my Guano in the strongest and best bags, each one containing 182 lbs., or eleven to the ton. This has been done, because bags of this size will just hold two bushels of grain—less will not, and they are, of course, valuable to the farmer.

The Manipulated Guano should not be ploughed in deeply as Peruvian, but harrowed or shovelled ploughed in with the wheat.

JOHN KETTLEWELL,
or, G. OBER, Gen'l Agent,
Nos. 6 & 7 CORN EXCHANGE, BALTIMORE.

CERTIFICATES.

In publishing the following certificates of Mr. Allen, it is proper to say, that Mr. A. published them in response to an invitation from the Editor of the "*Southern Planter*." I have not the

honor of a personal acquaintance with Mr. A., but from the intelligence, care and promptitude with which his reports are made, and the motive which suggested them, I shall not be alone in the expression of regret that there are not more planters like him.

[From the Southern Planter.]

Experiments with American and other Guanos on Tobacco.

MR. EDITOR:—In the April number of the Southern Planter I promised you my experiment on Tobacco with American and other Guano—and here it is. Last year I selected a poor piece of light, sandy land, on which, after thorough preparation, I applied 400 pounds of American Guano to one acre; 400 pounds of Kettlewell's Manipulated Guano to another acre; and 400 pounds of Peruvian Guano to a third acre. Each acre was planted in Tobacco the same day, and cultivated all alike without any other manure. The result was as follows, viz: the American Guano produced 452 pounds of Tobacco per acre, at a cost of \$8 per acre; the Manipulated produced 520 pounds of Tobacco per acre, at a cost of \$10.40 per acre; and the Peruvian Guano produced 696 pounds of Tobacco per acre, at a cost of \$11.80 per acre. Now for the quality, and you have the whole experiment. The Peruvian was the largest and most slightly while in the hill, but when cured the Kettlewell's Manipulated was of the richest and best body, and the American decidedly the most inferior, indeed, it was all lugs, and mean lugs at that. We had a heavy rain in September, which caused it all to fire and spot badly, but the Peruvian more than any, and the Manipulated less than any. This experiment was made under my own eye—the land measured and the Guano weighed by myself. I know it to be accurate. And now, from these data, your readers can make their own calculations and draw their own conclusions—my own humble opinion is in favor of the Manipulated.

Very respectfully,

R. H. ALLEN.

Oral Oaks, Va., April 12th, 1860.

[From the Southern Planter.]

Experiments with American and other Guanoes.

MR. EDITOR:—In the March number of the Southern Planter you ask for experiments with the American Guano. Having, last year, made some experiments with it and with other guanoes, in order to test their respective merits, applied to both corn and tobacco, in which I was very particular, and, I believe, accurate, I now submit the results of the experiment on corn, and will, if you desire it, communicate hereafter the particulars of the one on tobacco.

I selected a very poor piece of land for the experiment on corn, such as would not have produced more than five bushels per acre, if as much,—the selection being made of land thus poor, the better to test the strength and productiveness of the different guanoes used. I marked off three acres, all as nearly equal as could be determined by the eye, and after thoroughly

ploughing and preparing the land, I applied on the 30th of April to one acre 200 lbs. of American Guano, costing \$40 per ton of 2,000 lbs., which was an outlay of \$4 per acre; on another acre I applied 200 lbs. of Kettlewell's Manipulated Guano, costing \$52 per ton of 2,000 lbs.—an outlay of \$5.20 per acre; and on the third acre 200 lbs. of Peruvian Guano, costing \$59 per ton of 2,000 lbs.—or \$5.90 per acre. These several applications were made broadcast, and the guanoes thoroughly incorporated with the soil. The corn was all planted on the same day, and the after cultivation was neat and thorough, but in the month of August it all suffered intensely with drought, for about three weeks, which I think curtailed the crop very much. It is proper that I should state that the same number of stalks grew upon each acre—there being not a missing hill in either. In the month of November, the product of each acre was carefully gathered and stored away by itself; and in January, after having become thoroughly dry, each parcel was shucked, shelled, measured and weighed separately, and the result is as follows:

The American Guano made 784 lbs. per acre, which was 196 lbs. of corn for each dollar expended, and it weighed 55 lbs. per bushel.

The Kettlewell's Manipulated made 1,176 lbs. per acre, which was 226 lbs. for each dollar expended, and the corn weighed 56½ lbs. per bushel.

The Peruvian Guano made 1,224 lbs. per acre, which was 207 lbs. of corn for each dollar expended, and the corn weighed 54 lbs per bushel.

These experiments were fairly made, are correctly stated, and prove conclusively that the Manipulated Guano is the best and cheapest application for corn. But every gentleman can test the calculations, judge for himself respecting the peculiarity of the season, and deduce from the premises his own conclusions.

All which is respectfully submitted,

R. H. ALLEN.

Oral Oaks, Va., March 23d, 1860.

We are very much indebted to Mr. Allen for the above communication, and will be still further obliged to him for the results of his experiments on tobacco, which he so kindly offers to furnish.

WASHINGTON CITY, D. C., March 5th, 1860.

Dear Sir: As you desire a statement of me relative to my experience and success in the use of your (Kettlewell's) Manipulated Guano, I do not think I have a right to decline complying with your request.

About five years since, I commenced trying to improve an old worn out farm, in Westmoreland county, Va., which had been in cultivation for more than one hundred years, and tenanted out for more than twenty. I tried the various fertilizers, and found I could not get a good stand of clover from Peruvian Guano, for in proportion to the luxuriant growth of wheat, the clover would be more or less deficient, having been smothered out. I also tried your Manipulated Guano, my attention having been drawn to it by the controversy in the agricultural papers relative thereto, and believing you the originator of it, I thought that manufactured by the inventor, certainly must have some superiority. With the

use of this Manipulated Guano, and Salt and Plaster, I had as fine clover as I ever saw grow; it was the admiration of the neighborhood, and soon thereafter a gentleman in the county became your agent for its sale, and it is now in general use. The Hon. W. Newton, an experienced and very successful farmer, used last fall, I understand, twenty tons of it.

I have used it side by side with Peruvian Guano, and saw no difference in the crops. Last season I had three good crops of clover from one field, following a good crop of wheat raised by the use of your Manipulated Guano, with the aid of Plaster only and no Salt. I also had an excellent crop of corn upon a field that had been in wheat with your Guano, and then in clover, and that plastered. This corn was an extraordinary crop, and the enquiry was often made, "how much Guano was put on that corn to make such a crop?" but the reply was invariably "not a pound," that it was the effects of fine clover raised from "Kettlewell's Manipulated Guano and Plaster;" and the first clover, it will be remembered, ever known to have been upon that land, which had been in cultivation more than a hundred years.

I regard the Manipulated Guano, especially when manufactured as you do it now of the best Peruvian and Nevaesa Guanos, as the most permanent fertilizer that can be used, if it be not put in too deep. It should never be covered more than a few inches; it then yields an abundant crop of wheat, and acts like a charm upon all kinds of grasses, especially clover, that "sine qua non" in the improvement of land. To expend the same amount of money per acre, in this, as in Peruvian Guano, the crop of wheat would be superior and the permanent effects as a fertilizer to the land, when combined with clover and plaster would be incalculable. I am convinced from my experience that any ordinary farm may be made permanently rich in a few years, by its use, combined with clover and plaster, and the four field system.

This is a hastily written statement, but I think you are entitled to it, and you can make what use you choose of it.

Respectfully yours,

S. L. LEWIS.

To J. KETTLEWELL, Esq., Baltimore, Md.

JACKSON, N. C., Oct. 25th, 1859.

MR. B. T. BOCKOVER:

Dear Sir: You ask me to give you my experience in the use of Kettlewell's Manipulated Guano. I am a practicing physician and my experience in farming is limited to a small pet farm. I have given some attention to the making and application of manures, and have used various fertilizers, and take pleasure in giving you the following statement.

Last fall I seeded a small lot of land in wheat which had grown in corn. Upon half of the lot, I applied 200 pounds of Peruvian Guano to the acre, and upon the other half, the same quantity of Kettlewell's Manipulated Guano. The wheat with the Peruvian Guano grew most luxuriantly, making a straw to average from 5 to 6 feet in height; that with the Manipulated, did not grow so high by an average of about a foot; but there was a notable difference in the heading; the latter

had more and better forms, and the grain was much fuller and better matured, the difference was at least 20 per cent. in favor of Manipulated Guano, as tested by weight in small quantities, and in the entire yield of my crop, I remark that my wheat took the rust badly, and that with the Peruvian suffered much worse than that with the Manipulated Guano, owing to the too heating nature of the former. I have a fine stand of clover upon my lot and shall be able to observe the after effects of the two guanos. From the above I give it as my opinion that the Manipulated is decidedly preferable to the Peruvian Guano, for wheat and all the cereals, and I think also for cotton. The analysis of Kettlewell's Guano shows at once its superiority to any one who will look at it scientifically; and the nice state in which it is prepared for use presents an additional reason for its demand.

Very respectfully yours,

W. S. COPELAND.

SCOTLAND NECK, N. C., Jan. 16th, 1860.

JOHN KETTLEWELL, Esq.:

Dear Sir: I have been using Guanos for five or six years and find it to be a great fertilizer. I used the Peruvian four years; I used Reese's Manipulated in 1858; I used yours in 1859, which I know to be the best I ever used. I planted four rows of cotton, using at the rate of 200 pounds per acre of your Manipulated Guano, which produced 75 pounds seed cotton, and I planted four rows of cotton without your Manipulated Guano, only producing 29 pounds, making 100 per cent. in favor of your Manipulated Guano.

Yours respectfully,

B. WEATHERSLIE.

LINDEN, Sept. 3, 1859.

JOHN KETTLEWELL, Esq.:

Dear Sir: I promised to give you a candid statement of the result of the use of your Manipulated Guano on my crops of this year. The result of the wheat harvest in Eastern Virginia, as you know, was anything but satisfactory. I think it due to you, however, to state, that my crops were quite as good, I might perhaps say, with truth, better than those of my neighbors. I used your Guano principally, and in small quantities, in various ways. I am satisfied that the yield of grain was quite as large, indeed larger than from many fields in my neighborhood dressed with Peruvian Guano. The season was very unfavorable for all fertilizers, and probably most so for Peruvian Guano, which forced the wheat forward and caused it to encounter the early rust.

I may say, however, that I am satisfied with your Guano, and shall send you a large order in a few days. Having visited your works and witnessed the manipulating process, and had from you full and candid explanations of the whole business, I am satisfied, not only of the thoroughness, but of the entire fairness of the operation. Under this impression I take pleasure in recommending your enterprise to the patronage of my brother farmers.

Yours truly,

WILLOUGHBY NEWTON.

WEST RIVER, July 24, 1859.

JOHN KETTLEWELL, Esq.:

Dear Sir: The effect of the Manipulated Guano, No. 1 (procured from you) on tobacco has been so marvellous, that I consider it my duty to voluntarily furnish you with this statement.

I bought last spring only $1\frac{1}{2}$ tons of it, to apply to a few knolls in an otherwise rich field—capable in good seasons of producing 30 bushels of wheat, or, on stubble, 1000 pounds of tobacco per acre. There were, however, a few spots so poor that I felt convinced they would not pay for the labor of cultivation without being enriched. I therefore applied to them about 300 pounds of your mixed Guanos to the acre, broadcast and before laying off. The plants in these spots stood remarkably well and seemed to grow off almost immediately after being set, and have continued up to this time far ahead of all other portions of the crop. So marked is their superiority that the eye at once traces the extent of the application of the fertilizer; and it would be well worth your while to come down and see for yourself. I am satisfied that I should have profited by a similar application to the entire field, especially as, from former experience, I have a right to anticipate a most beneficial result from its use on the succeeding crops of wheat and clover.

Respectfully, your ob't serv't,
GEO. W. HUGHES.

PRINCE GEORGE'S Co., Aug. 25, 1859.

JOHN KETTLEWELL, Esq.:

Dear Sir: I received your note some time since asking a word from me in reference to your Manipulated Guano. I have to say that I have used it upon wheat, oats and tobacco, somewhat extensively, and in all cases am satisfied with the result, and shall use it so long as I obtain the same good results. I have not *experimented* with it, as compared with other Guanoes, that I have used, but am better pleased with the general results of yours, than any other I have used. My wheat and oats, where it was applied, ripened beautifully. The last sowing (with your Guano) was harvested before the early without Guano—the straw light and the grain full. The tobacco ahead of that along side upon better land.

Respectfully yours,
WM. D. BOWIE.

NEWSOM'S DEPOT, VA., Dec. 2, 1859.

MR. B. T. BOCKOVER:

Dear Sir: Your letter requesting my opinion as to the effect of Kettlewell's Manipulated Guano is to hand. I can simply say that I used some dozen bags of Manipulated Guano along by the side of Peruvian this year. I can see no material difference; though I think that on which Manipulated was put, the cotton opened a little earlier which is decidedly in the favor for our season. I had several rows left in the field that no Guano was placed in, and there is a perceptible difference as to the luxuriency of its growth.

Very respectfully,
BENJ. E. WORRELL, Jerusalem, Va.

FIELDING, NORFOLK, Co., VA., Oct. 17, 1859.

MR. B. T. BOCKOVER:

Dear Sir: Your letter requesting my opinion of Kettlewell's Manipulated Guano has been re-

ceived and I take this opportunity to reply. Last spring I saw Kettlewell's Guano so highly recommended, I bought of you several bags which I used as an experiment with Peruvian Guano, on corn, beets and raddishes. My raddishes and beets where I used Kettlewell's Guano were *much the best*, and my friend, whose attention was called to it, agreed with me in my opinion of the good qualities of Kettlewell's Guano. On my corn, I used about two pounds to the hundred yards, but could not perceive any difference from that of the Peruvian Guano.

Yours, very respectfully,
WM. H. HAYNES.

RAVENSWOOD, REDMOND Co., GA., Dec., 1859.

MR. KETTLEWELL:

Dear Sir: It affords me pleasure to give you the satisfactory result of a trial of your admirable fertilizer. I used the season just passed one hundred pounds, with one sack of Salt per acre, on cotton land that previously could not produce over 300 pounds of seed cotton per acre. The result of your Guano with the Salt was 700 pounds. I estimate that the cost of the Guano and Salt will be covered by 130 pounds of seed cotton, which would leave a net gain by the increased production of 270 pounds per acre. I have not given your Guano a trial singly, but have no doubt that it would alone, 100 pounds to the acre, increase the production of ordinary cotton lands, 100 per cent. and do not hesitate to recommend it to our Southern planters generally.

Respectfully,
ROBERT A. ALLEN.

HERTFORD, N. C., Nov. 12, 1859.

B. T. BOCKOVER, Esq.:

Dear Sir: It affords me pleasure to say to you that I have used, with very eminent success for the last two years on my wheat crop, "Kettlewell's Manipulated Guano." My crop this year was on an average of $13\frac{1}{2}$ bushels to the acre, clear of cheat, rust or smut, and sells for the highest prices in the market.

The use of it does not impoverish the land as "Peruvian does," but fertilizes and improves it, adding to the soil fertilizing qualities which it did not possess before. The crop of every neighbor falls far short of mine in quality and quantity, and some of them purchased seed wheat of me—they used the Peruvian.

Yours respectfully,
JOHN PARKER JORDAN.

JACKSON, N. C., Oct., 8, 1859.

MR. B. T. BOCKOVER:

Dear Sir: Mr. E. E. Potlock, jr., handed me your card a few weeks since and informed me that you keep Kettlewell's Manipulated Guano for sale. I want a half a ton of this Guano, the No. 1, to put on a wheat crop, and if you will send it to me, to the Seaboard Depot, on the S. & R. Railroad, the account shall be right when presented. I refer you to Messrs. Odum & Clemments, as to my responsibility.

I have a little pet farm, on which I use from one to two tons of Guano a year. I made a trial of Kettlewell's by the side of Peruvian Guano, last fall, on a wheat lot, and the former made a turn out of at least 20 or 25 per cent. the best. I

am so pleased with it that I desire to use it again. The excellence of this Guano over Peruvian is at once evident for the cereals, to any one who will observe the analysis. I understand it also does finely in cotton.

Yours very respectfully,
W. S. COPELAND.

LIST OF AGENTS.

The following are the Agents for the sale of "Kettlewell's Manipulated Guano" North of S. Carolina:

MARYLAND.

V. S. BRUNNER, Frederick City.
R. C. CARTER, Denton.
STRAUCH & EVAS, Church Hill.
W. THOMPSON of R., Montgomery county.
FEDDEMAN & CONNOLLY, Centerville.
GRAFTON DUVAL, Buckeystown, Md.

VIRGINIA.

DEANE, HOBSON & JAMES, Richmond.
DONNANS & JOHNSTON, Petersburg.
ADAMS & FRENCH, Fredericksburg.
B. T. BOKOVER, Norfolk.
JAMES E. HASKINS, Clarksville.
SAMUEL B. ATWILL, Montross.
R. L. HARVEY, Cobb's Hall.

DELAWARE.

WILLIAM CANNON, Ridgeway.

NORTH CAROLINA.

PIPPIN, DOWD & BAKER, Tarboro'.
OATES & WILLIAMS, Charlotte.
JOHN H. HINDMAN, Scotland Neck.

JOHN KETTLEWELL,

or, G. OBER, Gen'l Agent,

Nos. 6 & 7 CORN EXCHANGE, BALTIMORE.

Feast's Fillmore Strawberry.



We offer the Fillmore Strawberry at reduced rates, viz: Price per doz. Plants, \$1; for 100, \$5; for 500, \$15; for 1000, \$25. We can confidently recommend it to Amateurs and Commercial Growers as the best Strawberry cultivated to our knowledge. This past season it has sustained its superiority over the best tested fruit recommended by the different Pomological Societies held in the United States.

We also offer for sale a large assortment of Ornamental and Fruit Trees of choice kinds, Evergreens, Raspberries, Asparagus, Osage Orange for hedges, Dahlia and Dutch Bulbous Roots, Greenhouse Plants, Grape Vines and over 20,000 Roses of the most approved kinds, on reasonable terms. Catalogues furnished on application.

SAM'L FEAST & SONS,

Cor. Charles and Saratoga streets,
sept-3t Baltimore, Md.

Cranberry Circular.

Having been appointed "General Agent" for the sale of "Woodward's American Cultivated Cranberry Plants," I will send a "Cranberry Circular," relating to the same, free, on receipt of address, including Town, County and State. Address
EDWIN A. CLEVELAND,
sept-3t Box 700, Philadelphia, Pa.

Peach, Apple, Pear, Cherry and other
Fruit Trees of all descriptions,
in large or small quantities.



SMALL FRUITS, including all the desirable varieties of CURRANTS, GOOSEBERRIES, RASPBERRIES, STRAWBERRIES, BLACKBERRIES, GRAPES, &c.

Evergreens and Shade Trees, Flowering Shrubs, Vines, Roots, &c., in great variety. ARBORVITAE, HEMLOCKS, and other plants for Hedges. Stock for Nurserymen, Landscape Gardeners and Dealers, wholesale and retail, on liberal terms.

Send for a Catalogue.

DAVID J. GRISCOM, Evergreen Nursery,
sept-3t Woodbury, New Jersey.

Southern Fruits.

The subscriber will have for fall planting the largest stock and best grown Trees he has ever before offered for sale. He has made Southern winter Apples a speciality, of which he has 100,000 trees, confident from experience that Northern sorts are of no value from Maryland South. Also a large stock of Peach Trees, many Southern sorts; Dwarf and Standard Pears, with all the other Fruits; Ornamental Trees, Evergreens. Roses and other Flowers.

A Catalogue will be sent to all applicants.

H. R. ROBEY,
sept-2t Fredericksburg, Va.



Warranted Garden Seeds,

Fresh and Genuine in every variety, furnished to the Trade, either in packets for retailing or in bulk.

PASCHALL MORRIS,

Philadelphia Wholesale & Retail Seed Warehouse,
sept 3t 7th & Market streets, Philadelphia.

Peach Trees. Cherry Trees.

The subscribers offer for sale 75,000 Peach Trees, one year from the bud, of strong and healthy growth, and popular market varieties.

25 Cherry Trees, two and three years from the bud.

Also, a general assortment of other Nursery Stock.

Having made a speciality of growing Peach and Cherry Trees, we are prepared to offer them in large or small quantities, at low rates.

STEPHEN HOYT & SONS,

sept New Canaan, Ct.
(3½ miles from Norwalk.)

AULT'S CELEBRATED

ENGLISH CABBAGE SEED.



We are now prepared to furnish our FALL CABBAGE SEEDS, viz: Ault's large Early York, Ault's Early York, Ault's Early Bullock's Heart, Ault's new Early Queen Victoria, Early Winingstadt, Flat Dutch, Savoy and all other Cabbages.

They are fresh, pure and genuine, the same superior quality as sold by us last and former years. The same can be obtained only from us.

Also, Spinach, Kale, Cauliflower, Lettuce, Turnip, Radish, Parsley and other Seeds.

For sale, Wholesale and Retail by

sept-1t SAM'L AULT & SON,
Cor. Calvert and Water sts., Balto., Md.

Portable Cider Mills,

Horse Powers and Threshers, Grain Fans, Wheat Drills, Sorghum Mills, Cook's Patent Sugar Evaporators, Corn Shellers, Hay, Straw and Fodder Cutters in great variety, Spain's Atmospheric Churns, Plows and Harrows, with every thing for the farm and garden, at wholesale and retail.

PASCHALL MORRIS,

sept-3t Agricultural Warehouse, 7th & Market sts.
Philadelphia.

Fruit & Ornamental TREES,

FOR THE AUTUMN OF 1860.

ELLWANGER & BARRY

Invite the attention of Planters, Nurserymen, Dealers, &c., to the great stock of FRUIT and ORNAMENTAL TREES, SHRUBS and PLANTS, which they now offer. The season has been exceedingly favorable, and consequently the stock of all kinds is of the finest description.

FRUIT DEPARTMENT.

STANDARD APPLE TREES, for Orchards, 3 to 4 years from bud and graft.

DWARF APPLE TREES, for Gardens, on Paradise and Doucin Stock, 1, 2 and 3 years from bud.

PEARS, on *Pear stock*, 2 to 3 years from bud.

PEARS, on *Quince stock*, 1 to 4 years from bud.

CHERRIES, on Mazzard stock, 2 years from bud.

CHERRIES, on Mahaleb stock, 1 and 2 years from bud.

PLUMS, Standard and Dwarf, 1 and 2 years from bud and graft.

PEACHES, NECTARINES and APRICOTS, 1 year from bud.

QUINCES, Orange, Portugal and Rea's Seedling.

FILBERTS, SPANISH CHESTNUTS, MADERIA NUTS, (ENGLISH WALNUTS.)

HARDY GRAPES, for the Garden and Vineyard, including *Delaware, Diana, Concord, Rebecca*, and all others of value.

FOREIGN GRAPES, (for Vineries,) 1 and 2 years from eyes. Strong, well ripened plants, in pots, of all the best old and new varieties, including *Buckland's Sweetwater, Muscat Hamburg, Golden Hamburg, Lady Downs, &c., &c.*

STRAWBERRIES—All the best sorts in cultivation, old and new.

BLACKBERRIES—*New Rochelle, or Lawton and Dorchester*, (the largest stock in existence.)

RASPBERRIES—A general collection, including those fine new everbearing sorts, "*Belle de Fontenay*" and "*Merveille de quatre Saisons.*"

GOOSEBERRIES—The best English sorts, and an immense stock of the *American Seedling* that bears most profusely, and never mildews.

CURRENTS—*White Grape, Cherry, Victoria, Black Naples*, and all other valuable old and new sorts.

RHUBARB, including *Linnaeus, Prince Albert, Giant, Victoria*, and many others.

NOTE.—No pains are spared by the proprietors and their assistants, in the Fruit Department, not only to ensure accuracy, but also to adapt the stock, as regards varieties, to the wants of the various portions of the country as far as practicable.

ORNAMENTAL TREES.

The stock is immense, all well grown and in perfect health and vigor. Nurserymen, Dealers, Landscape Gardeners, Park and Cemetery Companies, and gentlemen about to improve their grounds, are all invited to examine it.

DECIDUOUS TREES—*Elms, Maples, Cypress, Catalpas, Horse Chestnuts, Larch, Laburnums, Lindens, Magnolias, Mountain Ash, Tulip Trees, Salix, Poplars, Thorns, &c., &c.*, of all sizes.

WEeping TREES—*Ash, Birch, Elm, Linden, Mountain Ash, Poplar, Thorn, Willow*, including the *American and Kilmarnock*.

EVERGREEN TREES—*Arbor Vite*, (American, Siberian and Chinese,) *Red Cedar, Common Juniper, Balsam Fir, European Silver Fir, Norway Spruce, Red American Spruce, African or Silver Cedar, Japan Cedar*, (Cryptomeria,) *Pines*, (Austrian, Scotch, Benthamiana, &c.) *Fews*, (English and Irish,) *Tree Boz, Mahonia Washingtonia*, or "Big Tree" of California, and many other California Evergreens.

FLOWERING SHRUBS, including all the finest new varieties of *Althea, Calycanthus, Flowering Currant, Deutzia, Lonicera, Lilacs, Spiraeas, Syringas, Viburnums, Weigela, &c., &c.*

CLIMBING SHRUBS, such as *Honeysuckles, Bignomias, Aristolochia*, (Pipe Vine,) *Clematis, Ivy, &c.*

ROSES—A great stock, both on their own roots and budded on the famous Manetti stock. This cultivation is the largest of the kind in the Union, covering 6 to 8 acres of ground annually, and forming a speciality in itself. All the fine new sorts are annually imported, and poor ones discarded as soon as proved. The best only are grown in large numbers.

PÆONIES—(Herbaceous,) a superb collection of upwards of 80 varieties in 3 classes.

PHLOXES—A collection of 140 beautiful varieties in 3 sections.

CHRYSANTHEUMS—Fifty selected best sorts of the Large and Pomponée classes.

CARNATIONS, Picotees and Monthly Carnations, a fine stock.

HOLLYHOCKS—Superb double varieties of all colors.

DAHLIAS—A select assortment of the best varieties, the prize varieties are annually imported.

HARDY BORDER PERENNIAL PLANTS—Over 500 species and varieties. During the past four or five years we have given this class of plants special attention, one of our most competent men has had charge of it, and we have been constantly adding such desirable plants as we could find.

HARDY BULBS—Such as *Hyacinths, Tulips, Crocus, Crown Imperials, Jonquils, Lilies, &c.*, imported annually from Holland, ready to send out in September.

SUMMER and AUTUMN FLOWERING BULBS—Such as *Gladious, Japan Lilies, Amaryllis, Tigridias, Tuberoses, &c.*, by the dozen, 100, or 1,000.

GREENHOUSE and BEDDING-OUT PLANTS—of all the popular classes grown extensively and sold cheap.

STOCKS FOR NURSERYMEN.

PEAR SEEDLINGS, 1 year from seed bed.

MAZZARD CHERRY, 1 year, strong.

MAHALEB CHERRY, 1 year, strong.

COMEWELL WILLOW, to graft the weeping sorts on.

All parties interested are solicited to examine the stock and prices.

The following Catalogues are sent free, post paid, to all who apply and enclose one stamp for each.

No. 1, Descriptive Catalogue of Fruits, new edition, 1860.

No. 2, Descriptive Catalogue of Ornamental Trees, new edition, 1860.

No. 3, Greenhouse and Bedding-out Plants, Spring of 1860.

No. 4, Wholesale or Trade Catalogue, just published.

ELLWANGER & BARRY,

Mount Hope Nurseries,

ROCHESTER, N. Y.

sept-11

The Syracuse Nurseries

OFFER FOR SALE

The following Trees, Plants, &c.

- APPLE—2, 3, 4 and 5 years old; a very extensive assortment; well grown and handsome. Dwarf, 2 years old, very fine.
- PEAR—1 and 2 years old; Dwarf and Standard, so extensive in variety as to enable us to fill the most particular order. Also several choice varieties of bearing age.
- CHERRY—1 and 2 years old; Dwarf and Standard, beautiful Trees.
- PEACH, APRICOT, PLUM AND NECTARINE—Best varieties; trees very vigorous.
- CURRENTS—Cherry, White Grape, Victoria, and twelve other varieties; quality of plants superior to any grown elsewhere.
- GOOSEBERRIES—Houghton's Seedling, a good stock, and some of the best English sorts.
- BLACKBERRIES—Lawton or New Rochelle, Dorchester, and Newman's Thornless.
- RASPBERRIES AND STRAWBERRIES—Assortment especially large and desirable. Prices very low.
- GRAPES—An immense stock of Isabella, Catawba and Clinton, 1 and 2 years old, exceedingly strong and well rooted; also, very fine plants of the *Concord*, *Delaware*, *Diana*, *Hartford*, *Proflie*, *Northern Muscadine*, *Rebecca*, and *Union Village*; the seven for \$6. Also, a superior collection of *Foreign Grapes*, in pots.
- EVERGREENS—European Silver Fir; American and Norway Spruce; American Arbor Vitae; Balsam; Hemlock; Austrian, Corsican and Scotch Pines; ranging from 2 to 6 feet.
- DECIDUOUS—American and European Mountain Ash; Weeping Ash; American Elms; English Weeping Elms, (very gracefully); Horse Chestnuts; Catalpas; European Larch; Silver and Sugar Maples; Linden; Tulip Trees; (Nursery grown and very fine); Black Walnut and Weeping Willow.
- SHRUBS—Athenas; Fringe Trees, Purple and White; Double Flowering Almond, Cherry and Peach; Honeysuckles; Lilacs; Snowballs; Sweet Briar; Spiraea; and a great many others. See Catalogue No. 3.
- ROSES—One of the best and largest collections in America; best plants of the Augusta at \$1.
- DAHLIAS, PEONIES, BORDER PLANTS, BULBOUS ROOTS, &c., in great variety.
- RHUBARB—Cahoon's Giant and Linnaeus; the best two varieties without question; very low by the doz., 100 or 1,000.
- ASPARAGUS—Very strong, 1 and 2 year old roots.
- HEDGE PLANTS—Osage Orange; Honey Locust; Privet, 1 and 2 years; Red and White Cedar.

Our articles generally are of the finest growth, and will be sold at the lowest rates. For particular information see

Our Several Catalogues, viz:

- No. 1. A Descriptive Catalogue of all our productions.
 - No. 2. A Descriptive Catalogue of Fruits.
 - No. 3. A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
 - No. 4. A Descriptive Catalogue of Dahlias, Green House and Bedding Plants, &c.
 - No. 5. A Wholesale Catalogue for Nurserymen and Dealers.
- Forwarded on receipt of a stamp for each.

SMITH & HANCOCK.

Syracuse, August, 1860.

sept-2t

ISAAC JACKSON.

CHAS. DINGEE.

Harmony Grove Nurseries

The proprietors beg leave to call the attention of their friends and customers to their stock for the Fall trade:

- APPLES, Standard and Dwarf.
 PEARS, " "
 CHERRIES, " "
 PEACHES, PLUMS, APRICOTS, NECTARINES.
 50 varieties of Native GRAPES.
 100 " STRAWBERRIES.
 15 " CURRENTS.
 15 " RASPBERRIES.
 GOOSEBERRIES, RHUBARB, ASPARAGUS, &c.
 LAWTON'S BLACKBERRIES.

ORNAMENTAL TREES of every description, including most of the novelties.

OSAGE ORANGE, for Hedging.

The completion of the Baltimore Central Railroad through our grounds, offers us now ample facilities for shipping.

Address ISAAC JACKSON & CO.,
 Jennerville, Chester Co., Pa.

Catalogues sent to all applicants. sept-2t



50,000 Select Peach Trees

Of thrifty growth, for fall planting; also Fruit and Ornamental Trees and Shrubbery in every variety. Albany Seedling Strawberries, and 50 other choice varieties, with Raspberries, Blackberries, and other small fruits.

PASCHALL MORRIS,

Philadelphia Agricultural & Seed Warehouse,
 sept-2t 7th & Market streets, Philadelphia.

Grape Roots and Cuttings for Sale.

The undersigned will have for sale during the coming fall and spring, a large stock of well rooted Catawba Vines, and Cuttings of the Catawba and Isabella.

Price of Roots.....\$30 per thousand

" Cuttings, 1st quality..... 5 "

" Cuttings, inferior..... 2 "

Packed and delivered on the cars.

sept-tf L. GIDDINGS,
 Crownsville P. O. Md.

FOR SALE.

A fine 3 year old Devon Bull, 3 Cows, 4 Heifers, 1 Heifer Calf, all from a milking family. Also, 6 Young Steers, half Devon; 2 Bull Calves, half Devon; 4 Mixed Steers, five months to two years old, and a pair of large Work Cattle. Address MARTIN GOLDSBOROUGH,
 No. 119 N. Calvert street,
 sept-2t General Agent, Baltimore.

The Quarterly Meeting of the Executive

COMMITTEE of the MARYLAND STATE AGRICULTURAL SOCIETY will be held at the Society's Rooms, in Baltimore, TUESDAY, September 4th, at 11 o'clock, A. M. Business of importance will come before the meeting. A punctual attendance is requested.

By order of John Merryman, Esq., President,
 sept-1t SAMUEL SANDS, Secretary.

GUANO.

We inform dealers, Farmers and Planters that we are now making our usual extensive arrangements to supply our numerous customers with genuine and unadulterated GUANOS. Our stock is unequalled in its extent, variety and quality, by any house in the trade. We name:

No. 1 Peruvian Guano,

OF DIRECT IMPORTATION FROM PERU THIS SEASON.

ICHABOE GUANO,

Just imported direct from Africa, containing 11 per cent. of Ammonia and 25 per cent. of Phosphate of Lime—containing the best proportion of Ammonia and Phosphates of any Guano in the country.

Elide or California Guano

Imported this year per ship "Challenger." The reputation of this celebrated Guano is now so well established as to require no commendation at our hands. We are pleased to inform farmers that we can sell this Guano at prices greatly below those of last year.

Johnson's Island Guano,

From Pacific Ocean—a valuable Phosphatic, containing 63 per cent. of Phosphate of Lime.

Baker's Island Guano,

Of direct importation into this market, per ship "Mary Bradford," by W. H. Webb, Esq., containing 84.71 per cent. of Phosphate of Lime, the richest and most concentrated Phosphatic Guano known.

Jarvis Island Guano,

Imported direct into this market by W. H. Webb, Esq., containing 54.16 per cent. of Phosphates, being the richest ever yet offered to the public.


WHITE MEXICAN GUANO,

BROWN MEXICAN GUANO,

SUPER-PHOSPHATE OF LIME,

AND OTHER VALUABLE AND ESTABLISHED FERTILIZERS,

Which he will sell on most favorable terms, in cargoes or in lots from one ton to 1000 tons.

 All the above Guanos are warranted pure. The State Inspector's Analysis, together with the Analysis of the most celebrated Chemists of the country can be seen at our warehouses.

P. MALCOM & CO.,

Grain, Flour and Guano Warehouses,

July

WOOD STREET, (BOWLY'S WHARF,) OPPOSITE THE NEW CORN EXCHANGE.

P. MALCOM & CO.

OFFER FOR SALE

Baker's and Jarvis Island GUANO.

The undersigned have been appointed by W. H. WEBB, Esq., of New York, AGENTS FOR THE STATE OF MARYLAND FOR THE SALE OF BAKER'S AND JARVIS ISLAND GUANO, and are prepared to supply Dealers and Farmers with any quantity of the same at lowest established prices, in handsome and substantial bags or barrels.

The Baker's Island

Is now well established as the most valuable Phosphatic Guano ever offered to the agriculturist.—The present cargo which we have for sale, was imported direct into Baltimore, per ship "Mary Bradford." It contains, as per analysis of State Inspector, 84.71 per cent. of *Phosphate of Lime*, which together with its peculiar combination with various valuable properties, and its great solubility, renders it the richest and most concentrated Guano yet discovered.

The Jarvis Island

Is also of direct importation into this market, contains 54.16 per cent. of *Phosphate of Lime*, and is the richest ever brought into this market.

THESE GUANOS are warranted genuine, pure and unadulterated, and every package bears the name of the importer, STATE INSPECTOR and our own brand.

The BAKER'S ISLAND GUANO can only be obtained from us.

Pamphlets, containing the history of these Guanos, certificates from farmers and planters who have used them upon various crops in every section of the country and ample directions for their use, can be obtained at our counting-room.

P. MALCOM & CO., Grain and Guano Warehouses,
Opposite the Corn Exchange Building, Wood street, Bowly's Wharf, Baltimore.

Report of Analysis of Baker's Island Guano, imported per ship "Mary Bradford."

BALTIMORE, 67 SOUTH GAY STREET, April 20, 1860.

A sample of this, which was averaged by myself on board the ship "Mary Bradford," from a lot of about one thousand tons, was found to contain—

Of Bone Phosphate of Lime	73.62
Containing of Phosphoric Acid.....	33.72
" " Lime	39.90
Of Bone Phosphate of Magnesia	4.57
Containing of Phosphoric Acid.....	2.48
" " Magnesia	2.09
Of Phosphate of Iron and Alumina.....	7.81
Of Sulphate of Lime (Hydrated).....	0.81
Of Chloride of Sodium.....	0.61
Of Sand and Insoluble Matter only.....	0.48
Water as moisture only	1.89
Organic Matter, capable of producing Ammonia	10.21

100.00

Presenting the appearance of a light reddish-brown powder, intermixed with small white lumps and fibrous roots.

The Phosphoric Acid, combined with Lime and Magnesia, is equal to 78.80 per cent. of *Bone Phosphate of Lime*.

According to this Analysis this Guano is one of the most concentrated Phosphatic Guanos now in the market.

Considering the rapidly approaching exhaustion of the supply of rich Columbian and Mexican Guanos, this article will be so much the more welcome to the agriculturists, since its physical qualities and constitution promise speedy results.

aug

G. A. LIEBIG, Ph. Dr. Successor to Dr. Charles Bickell.

ICHABOE GUANO.

We desire to inform Planters, Farmers and Dealers that we have purchased the cargoes of ships "TARTAR" and "WAVE SPIRIT," just arrived in New York from Africa with the above named GUANO.

This very Rich and Valuable Guano

Was well and favorably known to the farmers of Maryland and Virginia 12 to 15 years ago, for its strong fertilizing qualities, but the Island from which it was obtained became exhausted. Recent discoveries have developed fresh deposits, of which the above named are the first arrivals in this country.

This Guano is very Dry, Free from Gravel and other Worthless Material,

And is of a highly Ammoniated character, presenting in its combination with Phosphate of Lime and valuable Salts, the best proportions of any *natural* Guano yet offered to the Agriculturist.

We submit the following Analysis and Certificate of Dr. Leibig of this city, with the guarantee of its being a

NATURAL AND GENUINE GUANO, AND NOT AN ARTIFICIAL MIXTURE.

This Guano is put up in strong bags of about 160 lbs. each, and is for sale only by the undersigned.

P. MALCOM & CO.,
Wood Street, (Bowly's Wharf,)
OPPOSITE THE CORN EXCHANGE.

CHEMICAL LABORATORY, No. 19 E. 12th street, N. Y.

Report of a full Chemical Examination of Ichaboe Guano, cargo of Barque "Wave Spirit," averaged in person, June 19th, 1860.

Ammonia	10.96
Bone Phosphate	14.43
Soluble Phosphoric Acid.....	1.46
Alkaline Salts.....	3.44

Signed **CAMPBELL MORFIT**, Chemist.

ANALYSIS:

Of Inorganic Matter	51.76
Containing of Phosphate of Alumina.....	5.29
Of Phosphoric ACID OTHERWISE COMBINED.....	11.30
Of Organic Matter	48.24
Capable of PRODUCING AMMONIA	10.90
	100.00

The 11.30 per cent. of PHOSPHORIC ACID mentioned above are equal to 24.67 per cent. of BONE PHOSPHATE OF LIME.

Signed **G. A. LEIBIG, Ph. Dr.,**
Successor to DR. CHAS. BICKELL,
67 South Gay street, Baltimore.

july

SINCLAIR & CO'S



Double Acting Fanning Mills!

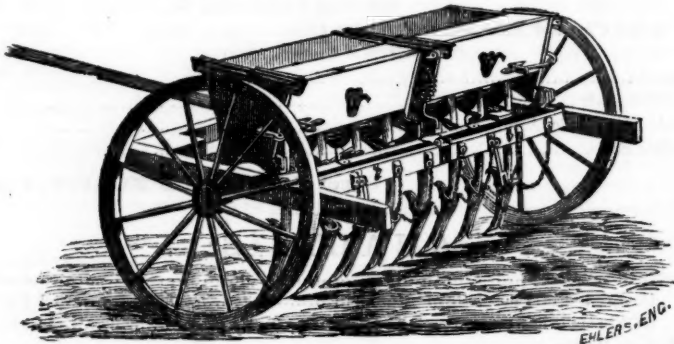
The Fanning Mills made by the subscribers are constructed with top and bottom screens, and embrace all the recent improvements of value. The materials and workmanship are so substantial, that we warrant our fans to endure 200 per cent. longer than the Eastern made article.

PRICES AND SIZES, viz:—No. 0, \$23; No. 1, \$28; No. 2, \$33; No. 3, \$38.

For farmers South of this city, in Maryland, Virginia, or North Carolina, size No. 2 is preferred.

R. SINCLAIR, JR. & CO.

Old Dominion Wheat Drill, with Guano Attachment, (STETSON'S IMPROVED.)



Awarded the First Premium by the Maryland State Fair in 1858, and Premium of 1859, also First Premium by the North Carolina State Fair, and Seaboard Society, at Norfolk, in 1859.

The construction of the Wheat Drill is simply a line of cylinders which may be regulated to drop any desirable quantity. The guano cylinder is constructed of horizontal and square staples, with revolving spurs to clear the escape-hole and prevent clogging the passage.

Every Drill manufactured and sold by us has given perfect satisfaction, and we believe it equal, if not superior, to any Drill in the market.

Price for 8 tine Drill, with Guano Attachment, \$100, or \$95 cash. Plain Drills, \$85.

sept

R. SINCLAIR, JR. & CO., 58, 60 & 62 Light street, Baltimore.